

THE CONCEPT OF “FLOW” IN BRASS PEDAGOGY: ITS HISTORY AND  
INTERRELATIONSHIP WITH THE THEORIES OF MIHALY CSIKSZENTMIHALYI

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*For Jackie and Jack,  
the embodiment of flow,  
and our first Doctors.*

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## Preface

The Master leads  
by emptying people's minds  
and filling their cores,  
by weakening their ambition  
and toughening their resolve.  
He helps people lose everything  
they know, everything they desire,  
and creates confusion  
in those who think that they know.

Practice not-doing,  
and everything will fall into place.

—Lao Tze

In music, so often a teacher makes the mistake  
of altering the machine activity rather  
than altering what he wants accomplished.  
The instructor is giving machine methods on how to do it,  
but people don't work that way. None of us can.

It is so simple.  
If you want a big breath,  
Just take in a lot of air.  
If you want to blow,  
just blow.

A teacher should always try for the simple answers  
that bring about the proper motor response.  
That idea belongs not in the realm of anatomy,  
but in the realm of psychology.

—Arnold Jacobs

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# Chapter 1:

## **Traditional Applications of Flow in Brass Pedagogy vis-à-vis Psychological Flow**

Throughout the history of brass pedagogy, the concept of flow has played an important role in the development of three central aspects of brass artistry: a musical, lyrical approach to phrasing; an unencumbered flowing approach to brass-instrument technique; and the efficient use of instrumental breathing, i.e. the flow of the breath as a central component of sound production. Since 1990, when the psychologist Mihaly Csikszentmihalyi outlined the concept “flow” as an optimal state of mind, “in which a person performing an activity is fully immersed in a feeling of energized focus, full involvement, and enjoyment in the process of the activity,” in his book by the same name, *Flow*<sup>1</sup>, it has also become an important idea in the field of psychology, including educational psychology, sports psychology, and psychology related to performance-studies including instrumental pedagogy.

Whilst pursuing my graduate studies in tuba performance and pedagogy at Indiana University’s Jacobs School of Music, and after reading Csikszentmihalyi’s influential work, I began thinking extensively about not only how psychological-flow is essential to optimal musical performance, but also about how great brass pedagogues might intuitively (or explicitly) apply psychological-flow concepts to dimensions of their pedagogical approach in one-to-one studio teaching.

With hindsight, I can see that in my own education as a brass musician, some of my most transformative leaps of progress happened during epiphanal moments in one-to-one studio lessons; moments in which I was so immersed and focused on my teacher’s pedagogical directive, that a previously artificial, analytical, self-consciousness approach to brass playing

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<sup>1</sup> Mihaly Csikszentmihalyi, *Flow: The Psychology of Optimal Experience, Steps Towards Enhancing The Quality of Life* (New York: Harper & Row, 1990), Kindle Location 130, Kindle.

(inherent with many student-musicians) was, *often without my full awareness*, being supplanted with a more natural, more intuitive, and more positively unconscious methodology, an approach often associated with optimal musical performance. What I now realize is that in these extraordinary instances during my one-to-one studio instruction, my teacher was helping guide my mind towards states of psychological-flow.

In excellent one-to-one studio teaching, I believe master brass pedagogues (indeed, master music instructors in all fields) have the ability to guide students from potentially debilitating states of self-consciousness, towards states of psychological flow, which, in turn, can give rise to optimal musical performance in those students.

As developing musicians, student brass-players often find that while acquiring the immense amount of information that is required for them to become technically proficient on a brass instrument, the potentially over-whelming volume of information can be the very thing that prevents them from attaining more sophisticated levels of musical communication and performance. This kind of over-cluttered, disordering of the mind that sometimes arises in the process of learning is obviously not only limited to musical pursuits: Csikszentmihalyi explains that, “whenever information disrupts consciousness by threatening its goals, we have a condition of inner disorder, or psychic *entropy*, [which is a kind of] disorganization of the self that impairs its effectiveness.”<sup>2</sup> This very kind of psychic entropy often occurs with advanced music students, who are at a critical point in their development where they have acquired vast wells of musical knowledge, but have not yet gained the ability to fully organize, synthesize and transcend that knowledge-base into musically cohesive and compelling communication.

Psychic *syntropy*, the opposite of psychic entropy<sup>3</sup>, is a term that nicely encapsulates the kind of psychological state of synthesis and transcendence, when thoughts are highly ordered, focused and energized, and is the kind mental state that occurs at the highest level of musical

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<sup>2</sup> Csikszentmihalyi, *Flow*, Kindle locations 878-880.

<sup>3</sup> Csikszentmihalyi, *Flow*, Kindle locations 937-939.

performance. Thanks to Csikszentmihalyi, who coined and popularized its modern usage, psychic syntropy is now more commonly known simply as “flow”.

I believe master brass pedagogues, who are often outstanding brass performers in their own right, intuitively understand (in part, from their own performance careers) that one of the essential pedagogical keys towards unlocking young brass players’ abilities, and thus transforming them from highly motivated students into outstanding performing artists, lies in the teachers’ ability to lead their students’ practice- and performance-minds from states of psychic entropy, towards states of psychic syntropy, or “flow” in one-to-one studio instruction.

Because the study of “flow-experiences” is still a relatively new field in educational psychology and because the study of psychological flow-experiences in brass pedagogy has not been thoroughly examined, one of the aims of my research has been to study the interrelationship between traditional pedagogical concepts of flow inherent in brass pedagogy, and the more modern concept of psychological flow-experiences, in order to expand this corner of brass pedagogy literature. By illuminating the inherent connections between traditional applications of flow as it applies to brass instruction, and flow-psychology, and by studying how master brass-pedagogues exploit this interrelationship, I hope to enrich the pedagogical palette available to instructors of brass.

### **Traditional Applications of Flow**

One of the aspects of this research that has been particularly fascinating to me, is realizing the numerous and inherent intersections between “modern” concepts associated with psychological, “optimal performance ‘flow’,” and “traditional” applications of flow as it applies to brass-pedagogy, which whether it has been the teaching the development of “lyrical flow” in musical phrasing, or mastering “technical flow” essential to advanced virtuosity, or controlling the “flow of the breath” which lies at the foundation of excellent brass playing—all which are

“traditional” brass methodologies that in different forms have been associated with brass-playing and brass-teaching for eons.

### **Lyrical Flow**

Indeed, from its earliest history the development of brass-playing artistry has been inextricably linked with creating flowing and uninterrupted musical lines, in part, because that history was linked with working and performing alongside vocalists, whose aesthetic of flowing lyricism has been central to Western classical singing traditions since its inception. Pedagogical concepts of lyrical-flow, via the flow of a vocal-like musical phrase, have been particularly central to brass playing since the Renaissance (ca. 1400-1600), when one of the primary occupations of the brass performer whether it be the *Stadtpfeifer* (municipal town-piper) in Germany, or the *piffari* (pipers) in Italy, was to literally play lyrical lines of music, doubling the vocal parts of the choir (for both pitch reference and sonic amplification), as part of the rich polyphonic choral music performed in chapels and cathedrals throughout Europe.<sup>4</sup> Indeed, “this practice was virtually universal in the performance of music in the *stile antico*, the classical sixteenth-century polyphonic style still much used in German Lutheran churches as late as the eighteenth-century.”<sup>5</sup>

This concept of playing brass instruments with a sense of lyrical-flow and in a style that emulated the stylings of polyphonic sacred music of the Renaissance, arguably reached its aesthetic zenith in early seventeenth-century Venice, and with the music of Giovanni Gabrieli (ca. 1555-1612). Gabrieli, whose great collection of sixteen instrumental pieces alongside an additional forty-five vocal works, the *Sacrae Symphoniae* (1597)<sup>6</sup>, demonstrate not only the

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<sup>4</sup> Bruce Dickey, “Cornett and Sackbut,” in *A Performer’s Guide to Seventeenth-Century Music*, ed. Jeffrey Kite-Powell (Bloomington: Indiana University Press, 2012), 102.

<sup>5</sup> Dickey, “Cornett and Sackbut,” 102.

<sup>6</sup> Timothy Roberts, liner notes to Giovanni Gabrieli: The Canzonas and Sonatas from *Sacrae Symphoniae* 1597, His Majestys Sagbutts and Cornetts and Timothy Roberts, Hyperion CDA66908, 1997.

virtuosic lyricism possible with the best brass instrumentalists of the day, but also reveal how linked the traditions of sacred vocal repertoire and brass playing had become during the High-Renaissance. The Italian nomenclature used for Gabrieli's instrumental pieces, "known as *canzon per sonar*—literally a 'song for playing'"<sup>7</sup> also explicates this interrelationship.

With the flowering of brass instrumental music at the end of the Renaissance, and with the outpouring, innovation, and diversification of all types of instrumental music and genres that grew up during the Baroque era (ca. 1600-1750), the roles of brass players and the types of brass playing continued to evolve. Although the role of the ceremonial fanfare-playing brass player on one hand (important to functions of the state and the royalty), and the church-choir accompanying lyrical brass player on the other, was still central to the livelihood and craft of the brass musician; by the end of the Baroque we can also observe the origins of the orchestral (including opera-orchestral) brass player, as well as the emergence of the brass-playing soloist (especially trumpet and horn) in significant works by many of the era's most important composers including Giuseppe Torelli (1658-1709), Antonio Vivaldi (1678-1741), Georg Philipp Telemann (1681-1767), George Frideric Handel (1685-1759), and Johann Sebastian Bach (1685-1750).

The diversification of musical styles and genres, as well as the continued development of brass instruments themselves during the Classical era (ca. 1730-1815), required a brass player to embody an increasingly sophisticated spectrum of playing skills, as well as comprehend an equally complex set of pedagogical approaches to hone and disseminate those skills to brass-playing students and apprentices. Amongst those skills, producing a singing, vocal-like approach to sound and phrasing continued to be paramount to the brass-players' development, as evidenced by directives such as this one included in Johann Ernst Altenburg's important 1795 treatise on brass playing, "Essay on an Introduction to the Heroic and Musical Trumpeters' and Kettledrummers' Art":

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<sup>7</sup> Timothy Roberts, liner notes to *Giovanni Gabrieli*.



Seek to express well the singing character of the slow movements, and execute properly the ornaments which occur . . . It is well known that the human voice is supposed to serve as the model for all instruments; thus should the clarino [trumpet] player try to imitate is as much as possible, and should seek to bring forth the so called *cantabile* on his instrument.<sup>8</sup>

It is worth highlighting that Altenburg asserts that the ideal approach to playing a brass instrument (indeed any instrument) with a singing style was virtually common knowledge at the time (i.e. “it is well known”), and that, indeed, playing with a flowing, lyrical “cantabile” approach was essential to the art of late eighteenth-century brass playing.

By the nineteenth-century, and in the heart of the Romantic era (ca. 1815-1910), an era which due to the ever-increasing centrality of opera as a driving aesthetic force, the importance of vocal music had become as significant in the realm of secular art music, as it had been for centuries in the sacred music traditions of the church. As in previous eras, the adaptation of a *cantabile* singing approach remained at the forefront of brass playing artistry, so much so that by the end of the century the concept of playing “vocally” with lyrical-flow had also become a fundamental cornerstone of brass pedagogy, a concept explicated in the brass literature of the day.

Nineteenth-century brass teachers borrowed extensively from the vocal and opera repertoire: many of the “complete methods” for brass instruments that emerged out of pedagogical practices employed at the Paris Conservatoire (which had been established in 1795, and had emerged as one of the most important centers of classical-music pedagogy in the world) included extensive sections on the *art of the phrasing*; chapters which borrowed numerous lyrically flowing melodies from opera arias, as well as art and popular songs. For example, Antoine Dieppo’s (1808-78) “Complete Method for the Slide or Valve Trombone”<sup>9</sup> (first published in 1835), and Joseph Jean-Baptiste Laurent Arban’s (1825-89) “Complete Celebrated

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<sup>8</sup> Johann Ernst Altenburg. *Trumpeter’ and Kettledrummers’ Art* (1795), trans. Edward Tarr (Nashville, TN: The Brass Press, 1974), 96.

<sup>9</sup> Antoine Dieppo, *Complete Method for Slide or Valve Trombone*, (1836; repr., Victoria: qPress, 2016), 65-157.

Method for Cornet”<sup>10</sup> (first published ca. 1859), both place prominent emphasis on developing a vocal flowing approach when studying brass playing and were both written-compiled by important mid-nineteenth-century brass professors at the Paris Conservatory.

Additionally, nineteenth-century brass pedagogues also borrowed directly from nineteenth-century vocal pedagogy methods. Another important pedagogue from the Paris Conservatory, horn professor Louis-François Dauprat (1781-1868), includes in his *Method for Cor Alto and Cor Basse* (1824) sage advice on the both the important interrelationship between singing and brass playing, and how best to adapt those exercises to the horn:

Good training in singing being, in general, the best course that could be followed by any student who intends to master any instrument, we have adapted for the horn the solfeges that the late Mengozzi and other professors of the Conservatoire selected and collected out of the works of the most celebrated Italian composers, such as Leo, Jomelli, Vinci, Caffor, and others.<sup>11</sup>

As with horn, vocal exercises and vocal pedagogical literature (i.e. *solfeges*) were adapted for trumpet, trombone (and eventually tuba), following what was becoming a firmly adapted tradition at the Paris Conservatory by the late nineteenth and early twentieth-century—most famously with the music of singer/pedagogues/composers: Giulio (Marco) Bordogni (1789-1856)<sup>12</sup> and Guiseppe Conconne (1801-61)<sup>13</sup> (both who taught at the famed Conservatoire)—that *solfeges* and *vocalises* were adapted as “melodious etudes” for brass, in order to further develop the graceful musicality essential to mastering the classic-romantic stylings of the day. This practice of adapting vocal or lyrical studies as a critical aspect of developing a brass student’s concept of how to play with a

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<sup>10</sup> Jean Baptiste Arban, *Arban's Complete Celebrated Method for Cornet or Eb Alto, Bb Tenor, Baritone, Euphonium and Bb Bass in Treble Clef*, ed. by Edwin Franko Goldman (New York: Carl Fischer, 1893), 191-245.

<sup>11</sup> Louis-François Dauprat, *Method for Cor Alto and Cor Basse* (1824), trans. Viola Roth (Bloomington, IN: Birdalone Music, 1994), 196.

<sup>12</sup> Joannes Rochut, ed., *Melodious Etudes for Trombone Book I: Selected from the Vocalises of Marco Bordogni* (New York: Carl Fischer, 1928).

<sup>13</sup> Donald S. Reinhardt, comp., *Donald S. Reinhardt's Selection of Concone Studies* (Bryn Mawr, PA: Elkan-Vogel Inc., 1943).

sense of lyrical flow, has continued uninterrupted to this day as a fundamental tool in the pedagogical approach for all brass instrument instruction.<sup>14</sup>

### **Technical Flow**

As with concepts of lyrical flow in brass-playing and teaching, mastering flowing technique of the instruments also started to become increasingly important, particularly from 1600, with the increasing virtuosity required in the ensemble and solo repertoire from the dawn of the Baroque era. With the advent of valve systems and the rapid modernization of brass instruments that accompanied the Industrial Revolution by the end of the eighteenth-, and particularly through the first half of the nineteenth-century, the virtuosic possibilities of all brass instruments were beginning to rise to the level of string and keyboard instruments that had flourished in the previous century.

Along with the emerging and expanded possibilities of technical virtuosity on brass instruments, the pedagogy of technical-flow quickly followed. In chapter two, I will more thoroughly explore the historiography of traditional pedagogical applications of lyrical, technical and breathing flow, but for now it is worth briefly taking a look at how more direct and explicit concepts of “flow”; concepts analogous to how we think of twenty-first century psychological flow started to emerge and evolve in the brass pedagogy of the twentieth-century.

Fuelled by the technical demands required of brass players in the compositions by post-Romantic European composers such as Gustav Mahler (1860-1911), Claude Debussy (1862-1918), Richard Strauss (1864-1949) and Igor Stravinsky (1882-1971), and equally importantly the virtuosity expected from the highly popular North American wind ensemble musicians exemplified in the music by its foremost composer, John Phillip Sousa (1854-1932), the range of *technical* expression expected from brass players was growing exponentially. In particular, solo

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<sup>14</sup> For example: Kristian Steenstrup, *Teaching Brass*, 2<sup>nd</sup> ed. (Aarhus: The Royal Academy of Music, 2007), 46-49.

brass playing featured in ensembles such as Sousa's band—which toured from 1892-1931 and performed over 15,000 concerts worldwide, and whom John Phillip Sousa was its most noted composer—fuelled a new golden age of brass playing.

Due to the demanding passages central to the virtuosic solo brass writing featured in brass bands, marching bands, and wind ensembles of the day, John Philip Sousa's famed cornet soloist, Herbert Lincoln Clarke (1867-1945) developed a series of technical “flow studies” (i.e. *Technical Studies for the Cornet*, first published in 1912)<sup>15</sup>, in order to address and improve the execution of the technique required for this challenging repertoire. In 1892, Sousa hired trombone soloist/composer Arthur Willard Pryor (1869-1942) whose virtuosity on the slide instrument (as well as in his numerous brass compositions) demonstrated a similar kind of technical-flow as his valve-playing colleague, Clarke (whom Sousa had hired in 1893). These two brass virtuosi/composer/teachers were perfect foils for each other within Sousa's Band, and also helped pave new standards of direct technical-flow applications on all brass instruments, applications that have continued to evolve to astonishing heights and in multifaceted directions over the last century.

Herbert L. Clarke's student, trumpeter Claude Gordon (1916-96), made the conceptual connection between technical facility on a brass instrument and “flow” yet more overt, entitling his technical studies modelled after Clarke, “velocity studies” in his *Thirty Velocity Studies for Trumpet* (1981)<sup>16</sup>. Inspired by these precedents, and by the rich brass pedagogy community flourishing in Chicago in the latter half of the twentieth-century, Vincent Cichowicz (1927-2006), professor at Northwestern University, and trumpeter with the Chicago Symphony Orchestra (from 1952-74), began compiling a series of progressively difficult legato technical exercises and etudes based conceptually on Clarke (and Gordon), and arranged them in a book simply titled “Flow

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<sup>15</sup> Herbert L. Clarke, *Technical Studies for the Cornet* (Boston: Carl Fischer, 1912).

<sup>16</sup> Claude Gordon, *Thirty Velocity Studies for Trumpet* (New York: Carl Fischer, 1981).

Studies”<sup>17</sup>, thus fully explicating the relationship between technical acumen on a brass instrument and the concept of flow.

### **The Flow of the Breath**

Even more recently, the term “flow” has been associated with the study of instrumental breathing technique which took on a central role in brass pedagogy in the last quarter of the twentieth-century, largely through the widespread influence of its leading advocator, the former Principal Tubist of the Chicago Symphony Orchestra, and renowned wind instrument pedagogue, Arnold Jacobs (1915-98).<sup>18</sup>

Jacobs’s famous mantra of brass-playing and pedagogy, “song and wind” was not only revolutionary in its reductive simplicity, but also belied the rich sophistication of the underlying thought that underscored Jacobs’s philosophy. The study of the flow of the breath, or in Jacobs’s terminology, “wind”, as it relates to wind and brass playing is one of the most significant contributions he made to instrumental pedagogy. One of Jacobs’s most radical pedagogical innovations was in his conscious uncoupling of learning the act of breathing from learning the act of playing. An advantage of this ingenious and counterintuitive methodology is that when a brass student masters breathing as a separate instrumental technique, and then subsequently reintegrates proper brass breathing into the act of playing, the flow of the breath becomes so second-nature to the student that it becomes an unconscious, yet integral, action (i.e. or a “conditioned response”) essential to excellent brass playing.

As Jacobs explains, when playing, eighty-five percent of one’s mental focus should be on music (i.e. “song”), and fifteen percent on the breath (i.e. “wind”). “We need respiration, but it

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<sup>17</sup> Vincent Cichowicz, *Flow Studies, Volume 1*, comp. by Mark Dulin and Michael Cichowicz (Montrose, CA: Balquhidder Music, 2013).

<sup>18</sup> Dee Stewart, comp. *Arnold Jacobs: The Legacy of a Master* (Northfield, IL: The Instrumentalist Publishing Co., 1987).

should not be overdone. We need air for fuel, but fuel is not music.”<sup>19</sup> Jacobs believed that when brass players and pedagogues are mastering breathing technique, it should be a process that is executed and practiced away from the instrument. Jacobs underscores that as with any complex mind-body activity, breaking down its constituent parts into manageable exercises that can be studied and practiced is key to channelling those constituent parts into the mastery of the larger goal. Precisely because the nature of breathing for a wind or brass instrument is inherently unnatural, yet is a central aspect of the music-making and of the pedagogy, it is more easily and holistically comprehended by first separating it out as a unique methodological process:

Establish good breathing habits through exercises away from the horn. There are no short cuts in music, but there are ways to maximise efficiency. Understanding is different than application. You can do it wrong and still sound good, but you will sound even better with the efficient use of the air. We are structured for survival, not music.<sup>20</sup>

By mastering the efficient flow of the breath, or “wind”, and by reintegrating breathing-technique as a fundamental building block of sound production, Jacobs argues that the brass player is freed to focus the majority of their mental energy towards creative music making, or “song”.

Although breathing pedagogy was just one of many significant contributions Jacobs made to the field of wind and brass education, its influence should not be underestimated. A whole generation of professional brass players and pedagogues were—either directly, through Jacobs’s extensive private studio teaching (particularly through the 1960s-70s), or indirectly, via his lectures and masterclasses on the subject (especially from the 1980s)—inspired to rethink and refine their own approach to breathing-technique as well as to pass on this new breathing pedagogy to their own up-and-coming students. Many outstanding brass teachers from this generation began adopting, adapting, and codifying Jacobs’s breathing-pedagogy into exercises and classes appropriate for brass-players from beginners to professionals. By the beginning of the

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<sup>19</sup> Bruce Nelson, comp. *Also Sprach Arnold Jacobs: A Developmental Guide for Brass Wind Musicians* (Buchloe, Germany: Polymnia Press, 2006), 47.

<sup>20</sup> Bruce Nelson, comp. *Also Sprach Arnold Jacobs*, 47.

twenty-first century, books, videos and internet resources on the subject, notably tubists' Sam Pilafian's (born 1949) and Patrick Sheridan's (born 1968), *The Breathing Gym* (2002)<sup>21</sup>, reached an ever-wider body of brass students from around the world and underscored the seismic waves of influence that Jacobs's novel approach to breathing-pedagogy had established nearly half a century earlier.

It is difficult to over-exaggerate the widespread influence Jacobs had on modern brass pedagogy, indeed perhaps his most significant contribution was his vanguard realization of the importance of optimal performance-psychology in the field of instrumental pedagogy. In the introduction to *Performance Success*(2002)—an important and influential contribution to the literature of optimal performance—the author, Don Greene, writes, “the pressures of performing music are so intense, so daunting, that few in the business dare so much as broach the topic; it’s taboo.”<sup>22</sup> Yet Arnold Jacobs was explicitly not only broaching performance-psychology and concepts of flow-pedagogy (nearly fifty years before they began to be embraced by a wider community of music educators), he was also intuiting the interrelationship of flow-psychology with more traditional aspects of brass pedagogy, such as breathing:

Focus on the psychology, not the mechanics of breathing. The mechanics of respiratory function are complicated; the psychology of respiratory function is simple. When you concentrate on the psychology of breath, the anatomical structures will take care of the physical activity needed to do the job.<sup>23</sup>

Indeed, it was through my own private lessons with Mr. Jacobs in the early 1990s, and my subsequent study under Indiana University, Jacobs School of Music's Provost Professor, Daniel Perantoni, himself also a student of Jacobs' (and one of the most successful propagators of Jacobs-inspired philosophies), that I first became interested in the research

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<sup>21</sup> Sam Pilafian and Patrick Sheridan, *The Breathing Gym: Exercises to improve breath control and airflow* (Mesa, AZ: Focus on Excellence, 2002).

<sup>22</sup> Don Green, *Performance Success: Performing Your Best Under Pressure* (New York: Routledge, 2002), 1.

<sup>23</sup> Bruce Nelson, comp. *Also Sprach Arnold Jacobs*, 45.

focus of this paper: the interrelationship of traditional applications of flow concepts with flow-psychology.

### **Method for Exploring Psychological-Flow Applications in Brass Pedagogy**

Csikszentmihalyi argues that when humans are involved in activities that require high levels of concentration, particularly when that concentration is focused on a limited field of attention there is a merging of action and awareness that promotes the potential for optimal states of mind. Aspects of that mind-state include a loss of the feeling of self-consciousness, a distorted sense of time, and a sense of personal control over the activity in which one is involved. The potentiality for optimal experiences of flow are increased when there are clear goals, when the activity is intrinsically rewarding, and when the challenge of the activity and the ability to meet that challenge is in balanced equilibrium.<sup>24</sup>

Every brass-playing musician who has had a performance, practice session, or a lesson in which they have become so completely involved in the process of expressing music that everything outside that musical experience falls away, has experienced the kind of psychological state that Csikszentmihalyi defines as “flow”.

Given the long history of flow concepts in brass instruction, the intention of my research is to investigate the interrelationship of *traditional* applications of flow in brass pedagogy with *contemporary* applications of “flow psychology” particularly when utilized as a pedagogical tool. By elucidating the interrelationship between traditional flow concepts and flow psychology, and by demonstrating the connection between applications of flow pedagogy and successful brass teaching, I hope to shed light on an area of brass pedagogy that may enrich the pedagogical approaches of those brass instructors who are unsure of how best to apply pedagogical concepts of flow.

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<sup>24</sup>Csikszentmihalyi, *Flow: The Psychology of Optimal Experience*.



Because it seems evident that outstanding brass pedagogues have the ability to effectuate flow experiences in their students and utilize this psychological tool as an important aspect of their studio instruction, I utilized an interview-study—of four exceptional brass pedagogues from various educational and cultural backgrounds, one from each of the four brass instrument groups represented in the symphony orchestra: horn, trumpet, trombone and tuba—as a primary data-gathering tool for grounded qualitative research, in order to explore and address the practical and primary question of this study.

Inspired by an interview protocol designed by Csikszentmihalyi (and included as an appendix in Csikszentmihalyi's *Creativity: Flow and the Psychology of Discovery and Invention*)<sup>25</sup>, I constructed two interview protocols that sought to investigate how traditional concepts of flow (i.e. lyrical-flow via the study of vocal pedagogy repertoire, technical-flow via the study of velocity studies, and the flow of the breath via the study of breathing exercises), intersect and interrelate with contemporary applications of flow psychology in brass instrument pedagogy.<sup>26</sup> For the study of flow applications in brass pedagogy I interviewed the following four master-teachers, who graciously agreed to participate in the study as interview subjects: Horn Professor at the Shanghai Music Conservatory (retired), Han Xian Guang; Trumpet Faculty at The Julliard School, Mark Gould; Trombone Professor at the Norwegian State Academy of Music, Ingmar Gunnar Roos; and Provost Professor of Tuba at Indiana University's Jacobs School of Music, Daniel Perantoni.

Before exploring the interview study in greater length in chapters three and four, and what that study may elucidate about potential links between traditional and modern applications of flow-pedagogy, chapter two will take a deeper look into the historiography of brass pedagogy, with particular focus on how central elements of traditional brass pedagogy seem to have intuitive

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<sup>25</sup>Mihaly Csikszentmihalyi, *Creativity: Flow and the Psychology of Discover and Invention* (New York: HarperCollins Publishers, 1996), 393-97.

<sup>26</sup> The interview protocols are attached as appendices A and B at the end of this document.

and organic connections with modern conceptions of flow psychology: namely, the history of brass phrasing and its ancient links to vocal traditions, the history of the teaching brass technique, including how the technological evolution of brass instruments themselves catalysed the rapid expansion of virtuosic and musical possibilities for brass-playing artists, and finally the history of breathing pedagogy, especially considering its late twentieth-century manifestations that included particularly strong associations with flow psychology, particularly through the voice of Arnold Jacobs, one of the most important instrumental pedagogues of the last century.

## Chapter 2:

### **Historiography of Brass Pedagogy as it Applies to Concepts of Pedagogical Flow**

"I cannot doubt that language owes its origin to the imitation and modification, aided by signs and gestures, of various natural sounds, the voices of other animals, and man's own instinctive cries."<sup>27</sup> — *Charles Darwin*

### **A Select Historiography of Lyrical Flow Applications in Brass Treatises of the Renaissance**

In 1400, at the dawn of the Renaissance, a great period of change and progress was emerging in European art music that would have long-lasting historical implications for the future of the classical music tradition. The rich vocal polyphony that dominated the aesthetic of the Renaissance era for generations—including music from the leading composers such as Guillaume Du Fay (ca. 1397-1474), Jean de Ockeghem (ca. 1420-1497), Josquin des Prez (ca. 1450-1521), Adrian Willaert (ca. 1490-1562), Orlando di Lasso (ca. 1532-1594), and the great Venetian composer Giovanni Gabrieli (ca. 1555-1612)—elevated sacred (and secular) vocal counterpoint to heights that would only be matched in future generations by the great Baroque contrapuntalist, Johann Sebastian Bach.

Giovanni Gabrieli, of course, holds a special place in music history for brass player; and his music that prominently features florid passages, explicitly written for brass players, represents a stylistic culmination and exemplifies the height of instrumental performance practice that had developed in the centuries that had preceded its composition. The instrumental works in his *Sacrae Symphoniae* (1597), *Canzoni per sonare* (1608) and his posthumous *Canzone e Sonate* (1615) represent some of the most sophisticated works of their kind, and demonstrate the extraordinary virtuosity possible for mixed instrumental ensembles featuring cornetts<sup>28</sup> and

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<sup>27</sup> Charles Darwin, *The Descent of Man and Selection Related to Sex*, (New York: Appleton and Company, 1872), 54.

<sup>28</sup> A cornett is a lip-vibrated instrument with an ivory or horn mouthpiece, and a wooden finger-holed body (hence in modern terminology, a kind of brass and woodwind hybrid), and the most important melodic instrument of the high renaissance.

trombones,<sup>29</sup> in the hands of its most accomplished performers.<sup>30</sup> As the music director and organist at Venice's most important place of worship, *Saint Mark's Basilica*, Gabrieli had at his disposal two of the most accomplished brass-players of the day (and two of the most handsomely paid instrumentalists of the city-state)—the cornettist and *Capo di Concerti* (head of the band) Girolamo Dalla Casa (d. 1601), and Dalla Casa's understudy and successor as *Capo*, Giovanni Bassano (ca. 1561-1617)—both who shared playing responsibilities in the instrumental ensemble that accompanied sacred services at *Saint Mark's*, and in leading the more secularly oriented *piffari* (wind) ensembles of the city.<sup>31</sup>

In addition to numerous contemporaneous accounts of their playing ability—as well as the numerous florid passages Gabrieli composed for them in his virtuosic cornett writing—Dalla Casa and Bassano are also known to history for their own musical compositions, and for their pedagogical advice contained in their treatises on instrumental embellishment: including Dalla Casa's *Il vero modo di diminuir* (Venice, 1584)<sup>32</sup>, and Bassano's *Ricercate, passaggi et cadentie per potersi esercitar nel diminuir terminatamente con ogni sorte d'istrumento* (Venice, 1585)<sup>33</sup>. Both of these historically significant works give numerous examples and instruction of how to embellish (and compose counterpoint to) melodies from motets, madrigals and chansons. There is little doubt that the expertise, including the compositional/improvisational skills of these two virtuosic cornettists, had significant influence on the mature compositional style (i.e. from the

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<sup>29</sup> Or sackbut, or renaissance trombone, all different iterations of the smaller bored ancestor of its modern cousin, the trombone.

<sup>30</sup> Richard Charteris, ed. *Giovanni Gabrieli Collected Works, X: Instrumental Ensemble Works in 'Sacrae Symohoniae'* (Venice, 1597), American Institute of Musicology (Neuhausen: Hänssler-Verlag, 1998), xiii.

<sup>31</sup> Timothy Roberts, liner notes to *Giovanni Gabrieli*.

<sup>32</sup> Loosely translated: "The true method of diminution (i.e. embellishment or ornamentation).

Denis Arnold and Andrea Marcialis. "Dalla Casa, Girolamo." *Grove Music Online*. 10 Feb. 2018, <http://www.oxfordmusiconline.com.proxyiub.uits.iu.edu/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000007076>.

<sup>33</sup> Loosely translated: "Ricecars, passages and cadenzas and how to embellish (*diminuir*: ornament, embellish) them on various instruments.

David Lasocki, Denis Arnold, and Fabio Ferraccioli. "Bassano family." *Grove Music Online*. 10 Feb. 2018, <http://www.oxfordmusiconline.com.libproxy1.nus.edu.sg/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000053233>.

1590s) of Gabrieli, and in his masterworks that first appear a decade after these two important late seventeenth-century brass treatises were first published by his cornett-playing colleagues.

Although the cornett was arguably the most important melodic treble instrument throughout the late-Renaissance, and despite the high benchmark set by virtuosi such as Dalla Casa and Bassano for artful brass-playing, the instrument's importance in the classical tradition began to wane shortly after reaching its historical zenith. At the turn of the seventeenth-century the cornett was “the most favoured melodic instrument—the leader of the civic wind band, the ‘most excellent instrument’ for imitating the human voice, and the preferred companion of both the trombone and the organ, an instrument of virtuosi,” yet within one hundred years the cornett would be nearly obsolete.<sup>34</sup>

In part, the cornett was a victim of its own success. The early Baroque era (i.e. circa 1600-50) witnessed a shift in redefining the relationship between text and music that would bring more expressive power to vocal music (including a number of important innovations that would lead to the birth of opera) on one hand; and an evolution in instruments and instrumental technique that led to an explosion of numerous and varied instrumental genres, on the other.<sup>35</sup> With the seventeenth-century advances in violin making and violin playing (the cornett was every bit the violin's equal at the beginning of the century in, in terms of its prestige and perceived aesthetic value), and precisely because instruments were becoming more segregated from the vocal ensembles they had grown up beside during the Renaissance, the violin became *the* preferred virtuosic treble instrument of the Baroque. Nevertheless, what made the cornett essential to the Renaissance, and what is of import to the discussion at hand, is its superior ability to blend, imitate, and compliment the human voice.

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<sup>34</sup> Bruce Dickey, “The cornett,” in *The Cambridge Companion to Brass Instruments*, ed. Trevor Herbert and John Wallace (Cambridge: Cambridge University Press, 1997), 59.

<sup>35</sup> Bruce Dickey, “The cornett,” 59.

Perhaps the reason concepts of lyrical-flow remain so central to brass pedagogy some six hundred years after the birth of the Renaissance, is because the function and form of brass-playing in its earliest forays into the field of art music was so inextricably linked to the human voice. Indeed the success of the family of brass instruments and its rapid ascendancy during the Renaissance, an era when vocal polyphony was the highest form of artistic expression, may be in no small part because the best cornett and trombone playing instrumentalists of the time were experts at imitating and blending with the vocalists they were accompanying and supporting. Despite the lack of abundance of primary historical sources for brass performance and pedagogy from the Renaissance (although recent scholarship continues to uncover previously undiscovered and invaluable documents), the extant sources that have come down to us through the ages underscore a prime pedagogical emphasis of approaching brass instrument performance with the kind of lyrical flow inherently associated with vocalizing; in short, the concept of singing, and singing *through the instrument* were inextricably linked.

It is not surprising then, that in one of the most important early brass treatises, the already mentioned *Il vero modo di diminiur* (1584), which despite it having fewer than ten pages of total text (i.e. excluding musical examples), Dalla Casa describes in considerable length the central importance of emulating vocalists when approaching the art of cornett playing<sup>36</sup>, and how this concept links pedagogically to the critical aspect of sound production:

**On the Cornett**

The cornett is the most excellent of the wind instruments because it resembles the human voice more than the other instruments. This instrument may be used soft and loud and in any sort of key just like the voice. It is necessary, then, to work at making a good sound on the instrument and to take care not to make the instrument be like a horn or feeble. For this purpose one needs to arrange the embouchure in such a way that it produces a good sound on the instrument. The open embouchure makes the instrument like the horn and weak, the embouchure too tense makes it crack. Thus,

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<sup>36</sup> What is also fascinating here is how brilliantly succinct Dalla Casa is in describing how to develop an excellent embouchure, i.e. one that is firm enough for accurate pitch control, but open enough in the mouth cavity so that one produces a resonant sound. Sage advice that still holds true over four hundred years later!

one will keep to the middle course. It needs to be played with discernment and judgment.<sup>37</sup>

Similarly, Dalla Casa's younger colleague, Bassano, opens his *Ricercate, passaggi et cadentie* (1585) with a description of how interlinked the performance-practice of singers and cornett playing (indeed of any instrument) was at the time, and importantly how *the simple voice* may be the ideal vehicle for better understanding how to adapt one's embellishments (i.e. *diminutions*) to the instrument in hand<sup>38</sup>:

**Giovanni Bassano, to the Reader**

Desirous, as much as I am able, to be of benefit to excellent musicians who delight in making diminutions, either by the simple voice or with instruments—either by one or the other means—I wanted to share this my work with you. From these you will see, by the guide of these my little ricercari, how you may be able to practice in diminutions with any wind instrument or with the viol.<sup>39</sup>

In Bassano's subsequent publication, *Motetti, madrigali et canzoni francese* (1591) in which he focuses on embellishments of motets, madrigals, and chansons, he further elucidates the numerous intersections between vocal and instrumental technique including employing "the single *gorgia* voice," a reference to the renaissance vocal (and instrumental) technique of utilizing the throat in rapid articulated passages (akin to how modern wind and brass players utilize the throat in rapid multiple-tonguing), essential to florid embellishment. Bassano also writes eloquently about instrumental/vocal balance considerations when embellishing, suggesting that one be careful to "yield place to each other," so that when playing with vocalists (or other instrumentalists), one is sensitive to each other's ornamentation. It is clear that in Bassano's

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<sup>37</sup> Girolamo Dalla Casa, *Il Vero Modo di Diminuir, con tutte le sorti di stromenti Books 1 & 2* (1584): 6, trans. Sion M. Honea, Historical Translation Series, accessed on February 11, 2018, <https://sites.uco.edu/cfad/files/pdfs/historical-performance/Dalla%20Casa%202.pdf>.

<sup>38</sup> Also worth noting that instrumentalists of the time often doubled a number of instruments of similar registration so that a cornettist was also, more often than not, adept at trumpet, viol, violin, etc. thus adapting these practices to different instruments. Thus, it is no accident Bassano mentions viol, as well as voice explicitly here.

<sup>39</sup> Giovanni Bassano, *Ricercate, passaggi et cadentie per potersi esercitar nel diminuir terminatamente con ogni sorte d'istrumento* (1585): 3, trans. Sion M. Honea, Historical Translation Series, accessed on February 11, 2018, <https://sites.uco.edu/cfad/files/pdfs/historical-performance/Bassano.pdf>.

methodology there is an implicit assumption of seamless connection between the lyrical flow of the vocalists and the lyrical flow of the accompanying brass players:

**Motetti, madrigali et canzoni francese (1591)**

This my present work in having diminished the present musical compositions was not made to the end of more glory but in order to give aid to those who might be able with easier study to have some help from it. Further, I have divided this work in three parts for four, five and six voices, advising that you make use not only of those motets or madrigals with words diminished for the single *gorgia* voice, but also you will be able to make use of them with what instrument pleases you, such as make diminutions without words. . .

. . . Songs diminished in this way, you will be able to use in ensemble by singing that voice alone among other instruments or a keyboard instrument alone with the bass played and a single voice. [In regard to] other diminished motets, the soprano and bass, as these two parts are singing together, yield place to each other in the diminutions. Enjoy, then, with pleasure, with that sincere spirit with which I offer it to you, while I am preparing my other new works for you, remember me and farewell.<sup>40</sup>

This early seventeenth-century performance (and pedagogical) practice of vocalists and brass instrumentalists being in virtual lock-step with each other's approach to sacred music making was not only limited to Venice (though one could argue it reached its most sophisticated aesthetic expression there), but was prevalent throughout Europe including Italy, Germany, France and England<sup>41</sup>. We are made aware of these mainstream performance practices, in part, thanks to Michael Praetorius (1571-1621), the prolific German composer who was also one of most important music academics of his day.

With his expansive multivolume treatise, *Syntagma Musicum* (1614-20), which includes one of classical music's first explorations of its own past in Volume 1 (*Musicae Artis Analecta* (1614)), an in-depth look at the instruments of the Renaissance in Volume 2 (*De Organographia* (1618))—including the famous series of forty-two meticulously woodcut illustrations of various musical instruments and instrument families (including to-scale comparisons, e.g. see family of

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<sup>40</sup> Giovanni Bassano, *Motetti, madrigali et canzoni francese (1591)*: 4, trans. Sion M. Honea, Historical Translation Series, accessed February 11, 2018, <https://sites.uco.edu/cfad/files/pdfs/historical-performance/Bassano.pdf>.

<sup>41</sup> Dickey, "Cornett and Sackbut," 106.



brass below)—and finally, in Volume 3 (*Termini Musicali* (1618)), an encyclopedic look at the genres and musical styles of the day, including extensive instructive advice and observations on composition and performance-practice common throughout early seventeenth-century Europe.

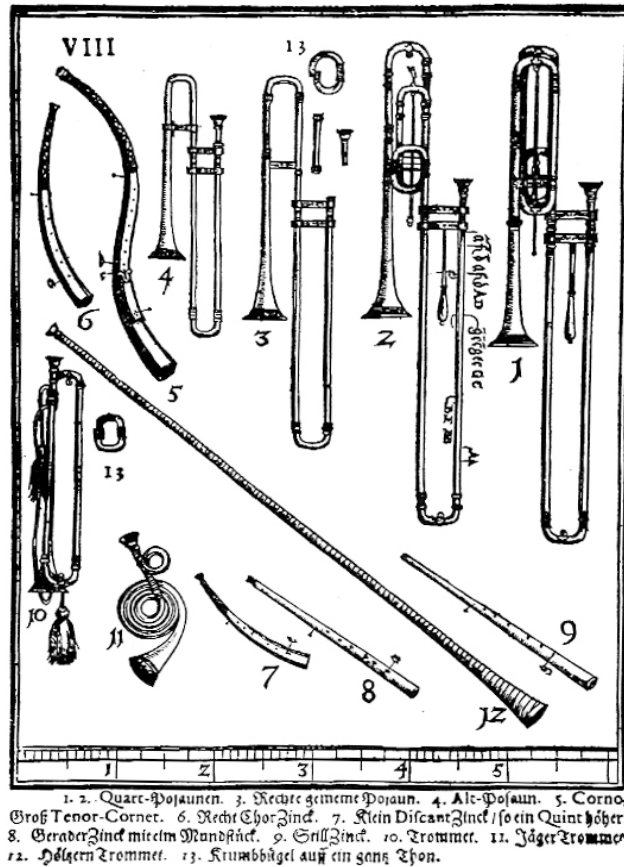


Figure 1: Trombones, cornetts, and trumpets in *Syntagma Musicum II*

Volume 3 of Praetorius's extensive *Syntagma Musicum* treatise is filled with illuminating examples of the intimate interrelationship between singing and brass-playing not only in Gabrieli's Venice—where the sacred and secular instrumental ensembles commonly utilized choirs of cornetts and trombones—but also in his native Germany where Praetorius advocates adding choirs of natural trumpets to the sonic palette. Natural trumpets, due to their all-brass construction, with few or no finger holes (depending on the maker), have a much more direct, full-bodied sound, compared to its wooden cousin, the cornett. Due to an extensive network of master/apprentice based trumpet guilds throughout German-speaking lands, the artistic level of

German trumpet playing was likely the highest in Europe at the time—and thus in expert hands, a lyrically-flowing style was achievable on natural trumpet that approached the facility possible on the more technically facile cornett. That being said, given that Praetorius here is discussing his own early seventeenth century compositions, his mention of the utilization of trumpets in his recent works is also illustrative of the stylistic shifts already occurring at the beginning of the Baroque (an era in which the trumpet would eventually overtake the cornett as the most important clarino-ranged brass instrument)—underscored by Praetorius’s mention that “other instruments such as violins, *cornetts*, and trombones may also be used to perform these pieces” if for some reason trumpets are not employed:

**Syntagma Musicum III, Section 3**

From Chapter VIII “*Advice Concerning the Form and Arrangement of the Latin and German Hymns and Concerted Compositions in my Polyhymnaiae and Other Works*”

To the first style belong the Latin and German songs in [Praetorius’s own pieces] *Polyhymniae Tubiciniae* and *Tympanistriae*; one may employ trumpets and timpani in these compositions in churches that justify their use.

If for some reason trumpets and timpani are not used, these works can still be performed in the town churches that do not own them; the Sonaden and whatever parts were composed for them can be omitted. If available, other instruments such as violins, cornetts, and trombones may also be used to perform these pieces.<sup>42</sup>

Praetorius in this next passage describes how vocal and instrumental parts may be assigned and divided in order to achieve ideal balance and blend between, voice, cornett (if there is a good cornettist available, no less!), and violins in *concertos* (i.e. in consorts)<sup>43</sup> of instruments or in mixed choirs of voices and instruments. What may seem like somewhat odd balance and blending choices from a modern brass-playing perspective (in part, because the design of modern instruments are evolved to maximise sound production, volume and projection) it is important to

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<sup>42</sup> Michael Praetorius, *Syntagma Musicum III*, trans. and ed. Jeffrey Kite-Powell, (New York: Oxford University Press, 2004), 172.

<sup>43</sup> Praetorius uses the original meaning of *concerto* throughout his text to refer to consorts, or groups of similarly sounding instruments.

emphasize that from a Renaissance performance-practice perspective, the volume on sacred brass instruments (i.e. particularly cornetts and trombones) were roughly a 1:1 equivalent to a vocalist in terms of sound production:



Example 1: Cornett and Violin Clefs for Cornett/Violin Choirs

### Syntagma Musicum III, Section 3

From Chapter VII: “*A Quick and Easy Method for the Arrangement and Distribution of Parts in Concertos and Motets for Few or Many Choirs and All Sorts of Instruments and Voices*”

#### I. Cornett and Violin Choir

If these four clefs are found in any order in a choir using the regular system or the transposed system, it is intended to be a cornett or violin choir. But in really high choirs it is almost preferable to use the violin rather than cornetts unless there is a good cornettist available who knows how to control his cornett well. He may then keep the highest cantus firmus for himself. One need not always use only cornetts or only violins, but may at times combine one violin and two cornetts, or two violins and one cornett, or one violin, one cornett, and one transverse flute or recorder. One part may even be sung by a discant singer as well as played, in which case the basset part should not be sung, but played by a trombone or an appropriate similar instrument.<sup>44</sup>

The more one delves into contemporaneous Renaissance literature such as Praetorius's, the more apparent it becomes that this interwoven mix of voice and brass was the assumed conventional performance practice of the time: that brass players/playing was virtually interchangeable with singers/singing. Furthermore, the production of lyrical-flow on a brass instrument was

<sup>44</sup> Michael Praetorius, *Syntagma Musicum III*, 159.

conceptually one and the same with the production of lyrical-flow inherent in artful singing of the Renaissance.

Although I've discussed cornett playing as a departure point for exemplifying lyrical-flow in brass instrument artistry during the Renaissance, the lyrical virtuosity possible on the Renaissance alto and tenor trombones closely matched what was possible on the cornett.<sup>45</sup> From the same chapter VII of *Syntagma Musicum III, Section 3*, Praetorius discusses the utilization of choirs of trombones, in similar language as the cornetts discussed above, and here highlights the possibility for the trombones to be afforded the privilege of doubling “the best melodies,” [i.e. because sacred music of the Renaissance was most often composed around the cantus firmus<sup>46</sup>, which was most often place in the tenor voice of any given composition]:

IV.  
Tromboni: Fagotti:  
**Posaunen / Fagotten Chor.**

The image displays musical notation for a Trombone and Bassoon choir. It features three systems of staves. The first system shows two staves with a treble clef and a bass clef, with the word 'oder' between them. The second system shows two staves with a treble clef and a bass clef, with the word 'oder' between them. The third system shows two staves with a treble clef and a bass clef, with the word 'oder' between them. The notation includes various musical symbols such as clefs, notes, and rests.

Example 2: Trombone and Bassoon Clefs for Trombone/Bassoon Choirs

<sup>45</sup> For example and an interesting historical aside, the Bassano family associated with Venice and Gabrieli were a highly regarded brass instrument playing dynasty, whose patriarch, Jeronimo Bassano (d. ca. 1550), was a famously virtuosic trombonist and grandfather to Giovanni.

<sup>46</sup> I.e. primary melodic/thematic melodic material, often based on extant plainchant.

#### IV. Trombone and Bassoon Choir

If clefs such as these indicated here or many other varieties are encountered in choirs, they are suited to an ensemble of trombones, bassoons or shawms by themselves, or may be intermingled with bassoons and trombones.

Generally the alto part, written in C-3, is sung together with trombones and bassoons, but at times one of the tenors, who part is in C-4 and who gets the best melodies, sings the part (which can also be sung quite nicely by a discant voice an octave higher), in which case the alto is not sung but must be played by an alto recorder or violin, an octave higher.<sup>47</sup>

Before departing from Praetorius's indispensable treatise, it is worth mentioning the plentiful times the German composer references Giovanni Gabrieli (and his compositions), as a model of concomitant compositional and performance-practice of the High Renaissance-early Baroque era. Throughout *Syntagma Musicum*, Praetorius discusses Gabrieli and his music dozens of times, both as examples of shared common performance-practice concerns of how to mix instruments and voices in a sacred choir, as well implying conceptual equivalence in the "orchestrational" balance between voices, and brass instruments, such as in this following passage:

#### **Syntagma Musicum III, Section 3**

From Chapter II "*Capella, Chorus pro Capella, Pachetto*"

I have seen a great number of such capellae in copies of various concertos by Giovanni Gabrieli, none of which was printed in last year's publications.

One finds in the same concertos, as well as in his first published *Cantiones sacrae* (1597), that the word capella designates for him the same things that the words Chorus Vocalis, Chorus Vocum mean to me, that is, that is, the choir that must be made up of singers. For example, one choir of a concerto may be arranged for cornetts, the second for violins, the third for trombones, bassoons, recorders, or similar instruments; but with each choir there must be at least one soloist, that is, a vocalist.<sup>48</sup>

As previously mentioned, the ever growing independence of instrumental ensembles in the early Baroque is evident here. That Praetorius, needs to underscore in the last sentence that in sacred-choir pieces, each choir should include at least one vocalist demonstrates in stark terms how

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<sup>47</sup> Michael Praetorius, *Syntagma Musicum III*, 163.

<sup>48</sup> Michael Praetorius, *Syntagma Musicum III*, 124.

interchangeable the stylings (and musical approach) of the instrumentalists were with the vocalists during this time. This is particularly striking precisely because Praetorius is addressing sacred music traditions here, where instruments (and especially brass instruments) had clearly found a secure performing home throughout European houses of worship—a performance-practice that had only fully evolved in the two hundred years since the beginning of the Renaissance (i.e. since circa 1400).

Because Gabrieli's music was on the compositional vanguard of the early Baroque, particularly in the realm of instrumental music (including formal structures such as sonata-form prototypes), it worth closing this discussion of *Syntagma Musicum III* with a reference to Gabrieli that appears near the opening of the treatise. In the following passage Praetorius discusses both vocal and instrumental music in various sacred and secular genres, and illuminates Gabrieli's practice of employing instrumental ensembles (largely constituted of brass players) and their potential for achieving *sinfonia*, or concordance of sound (as per the original meaning of the word):

**Syntagma Musicum III, Section 1**

From Chapter II “*Concerning Compositions with Sacred and Solemn Secular Texts, such as Concertos, Motets and Falsobordoni*”

Giovanni Gabrieli, and other excellent composers entitled sacred compositions and church concertos *Symphoniae sacrae sive Motettae*, suggesting that such compositions incorporate concertato voices and are simultaneously arranged for a variety of instruments. They are referred to simply as *sinfonia*, that is, a charming, sonorous concord.

In further consideration of Giovanni Gabrieli's last-published works<sup>49</sup>, he wanted it understood that the above-mentioned term *sinfonia* (alias Symphonia) is something that can be performed without voices, but on instruments alone, be they viols, trombones, and the like.<sup>50</sup>

That Praetorius poetically describes *sinfonia* as a “charming, sonorous, concord,” and the implication that this sound is achievable either in mixed ensembles with vocalists or in brass

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<sup>49</sup> Gabrieli had died in 1612, six years prior the publication of *Syntagma Musicum III*.

<sup>50</sup> Michael Praetorius, *Syntagma Musicum III*, 23.

ensembles playing alone, elucidates just how far brass instrumentalists had come in incorporating a flowing vocal lyricism into their art.

### Venice, 1600, as a Culmination of Lyrical Flow

Giovanni Gabrieli's music performed in St. Marks Basilica at the turn of the seventeenth-century, and the brass players—such as cornettists Girolamo Dalla Casa and Giovanni Basso who first performed it, were certainly some of the leading musicians of their day—but they did not grow up in a historical vacuum. Gabrieli represented a culmination of the rich polyphonic, polychoral compositional style that had been developed over the previous two centuries *throughout* Europe (Gabrieli himself had received invaluable training in Munich, under the guidance of Orlando di Lasso, one of the leading compositional masters from the previous generation). Similarly, Dalla Casa and Bassano represented a culmination of a rich multi-generational evolution of artful brass playing that reached back well into the middle of the fifteenth-century, and had expanded throughout the European continent and into England. It is worth taking a brief look back at several key aspects of this evolution.

Around 1400 advances in metallurgy technology allowed for easier crafting and bending of hollow brass tubing, which had significant implications for the rapid development of the first “S” shaped brass-instruments, as well as the “folded-form” shaped instruments associated with trumpets ever since.<sup>51</sup> These advances also allowed for the slide-technology essential for the trombone-family of brass instruments. In addition to the rapid development of virtuosic playing-technique that *piffari* and *Stadtppfeifer* had developed throughout the Renaissance, these innovations in instrument design also enabled brass-musicians to play increasingly sophisticated sacred polyphonic art-music, dance and other secular music forms, as well as the ceremonial

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<sup>51</sup> Keith Polk, “Brass instruments in art music in the Middles Ages,” in *The Cambridge Companion to Brass Instruments*, ed. Trevor Herbert and John Wallace (Cambridge: Cambridge University Press, 1997), 43.

music associated with royalty—a brass-playing tradition inherited down through the millennia, at least since the Roman empire.

At the turn of the sixteenth century—and with the consolidation of political power between the Duchy of Burgundy and the Habsburgs—the ascension of Maximilian I (1459-1519) to the position of Holy Roman Emperor in 1493, represented a significant expansion of the Holy Roman Empire. One of the ways the new emperor represented the power and regality of his new position was through the employment of some of the most renowned instrumentalists of the day, including one of its leading brass-players.<sup>52</sup> It is around this time that history first begins recording the names of brass-playing virtuosi. Augustein Schubinger (ca. 1460-1532), was a highly gifted multi-instrumentalist—from a musical dynasty of instrument playing Schubingers—recognised for his ability on a variety of instruments, including the trombone, lute, and the viol, it was Augustein’s abilities on the cornett, that brought him the most international attention.<sup>53</sup> It was surely, in part, because of his renown that the newly crowned Holy Roman Emperor hired Schubinger into his court in 1493, a position Schubinger retained for the entirety of Maximilian’s I reign (1486-1519).

It is from the 1490s, that the historical-record reports Schubinger (and a number of other brass players of his artistic stature) being utilized as featured instrumentalists in liturgical services (in addition to their more traditional ceremonial and secular playing responsibilities associated with the civic wind-ensemble repertoire of the *Stadtppfeifer*). This is historically significant because it marks with documentary evidence the artistic evolution that had occurred in the fields of brass instrument performance (and in instrument design), that had occurred throughout the fifteenth-century.

One may surmise that only brass instrumentalists capable of playing with a *dolce*-singing

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<sup>52</sup>Keith Polk, “Augustein Schubinger and the Zinck: Innovation in Performance Practice,” *Historic Brass Society Journal*, Vol. 1. (1989): 87 accessed February 13, 2018, <https://openmusiclibrary.org/article/228595/>.

<sup>53</sup> Bruce Dickey, “The cornett,” 53.



approach would have been invited to join the finest vocal ensembles of the day, particularly the one in the Holy Roman Emperor's court. Augustein Schubinger was manifestly an exemplar of this kind of artful brass playing, because his name is mentioned not only in the capacity of a supportive role with the vocal ensembles he was performing alongside with, but his *solo playing* skills are also highlighted, thus demonstrating Schubinger's penchant for the kind of *cantabile* approach that Dalla Casa and Bassano would later highlight in their brass-playing treatises. This is particularly momentous, because it clearly foreshadows the model of lyrically-flowing brass virtuosity that we associate with Gabrieli's generation, nearly one-hundred years after Schubinger's rise to fame.<sup>54</sup>

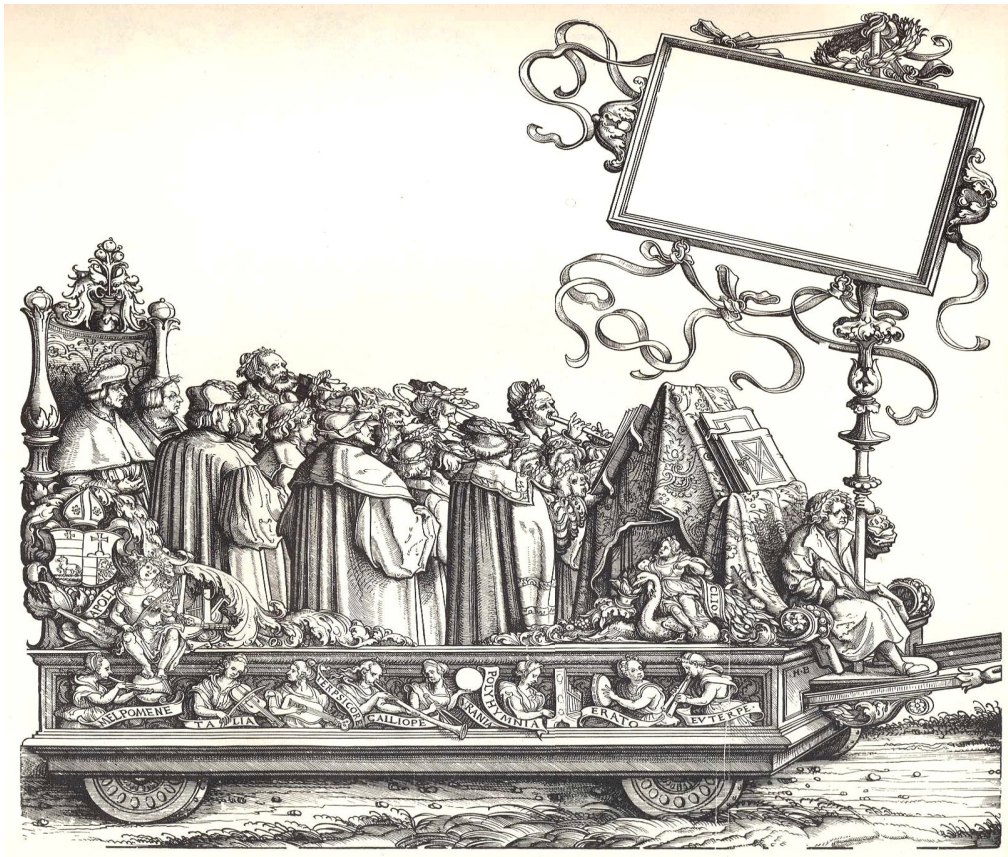


Figure 2: Woodcut by Hans Burgkmair from the *Triumphzug des Kaisers Maximilian I (1516-1518)*<sup>55</sup>

<sup>54</sup> Bruce Dickey, "The cornett," 52-53.

<sup>55</sup> Bruce Dickey, "Cornettomania" from a collection of Cornett iconography, accessed February 13, 2018, <http://www.bruceDickey.com/cornetto-iconography/>.

Thanks to a series of beautiful woodcuts by the German artist Hans Burgkmair (1473-1531), commissioned to celebrate the reign of Maximilian I, we are afforded a snapshot into the musical world that Schubinger inhabited. In Burgkmair's woodcut we can see Augustein prominently represented, in profile, at the front of the mixed choir (including depictions of a trombone-playing colleague, amongst a mixed-choir of boys and men), proudly leading the ensemble with his cornett-playing; all as Kaiser Maximilian I looks upon the performance admiringly. The honor afforded Schubinger of not only being employed by one of the most powerful royal families of Europe, but to also be memorialized in such ornate fashion is further evidence to the artistic impact he was making through his brass artistry. The fact that Augustein Schubinger is depicted *leading* a mixed ensemble of vocalists further illuminates how interwoven the musical art of brass instrumentalists was with the rich vocal polyphonic traditions of the early sixteenth-century.

The high artistic standard (and high *cultural* standing) that Schubinger exemplified as a brass-playing artist was not an isolated example, even in the early sixteenth-century. One of the most renowned composers, publishers and musical ambassadors in the generation after Schubinger was the Dutch musician, Tylman Susato (ca. 1510-70).<sup>56</sup> Susato's primary focus during the first part of his musical career was as a trombonist, and as was the case with Schubinger, Tylman Susato—as a multitalented instrumentalist whose departure point for the exploration of musical art was through his brass-playing—also played a central role in the development of sixteenth-century art music writ-large.

In the first half-century of the Renaissance (ca. 1400-50) brass playing was primarily contained within the realms of ceremonial and civic duties, but by the end of the fifteenth-century there was a clear evolutionary shift, whereby a number of brass-players had joined the ranks of the leading art-musicians of the day. Augustein Schubinger and Tylman Susato are both excellent

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<sup>56</sup> Keith Polk, "Brass instruments in art music in the Middle Ages," 50.

examples of this growing importance and influence of brass-playing artistry throughout the sixteenth-century. By 1600, brass players such as Dalla Casa and Bassano were not only in the ranks of the leading art musicians of the High Renaissance, they were, indeed—through the lyrical-flow epitomized though their vocal-like instrumental stylings—leading the way.

### The Trumpet Methods of Cesare Bendinelli and Girolamo Fantini

Before leaving the seventeenth century, it is worth mentioning two more important early brass treatises, both of which were published in the generation after Dalla Casa and Bassano, and both by *trumpet*-playing pedagogues (as opposed to the *cornett* oriented documents previously discussed): Cesar Bendinelli's (ca. 1542-1617) *Tutta l'arte della trombetta* (1614)<sup>57</sup>; and Girolamo Fantini's (1600 – ca. 1675), *Modo per Imparare a Sonare di Tromba* (1638)<sup>58</sup>. What is significant about both musicians, and their respective treatises, is that unlike the cornett methods discussed previously, both Bendinelli and Fantini were known through their *trumpet*-playing and teaching—and although it's probable that like other leading brass musicians of their day, they played multiple instruments (we know for example, that Bendinelli started his career on the trombone)—it is clear from the historical record of their performances and via their published methodologies, that with both musicians the art of *trumpet* playing emerged as their primary instrumental focus.

With the transition from the late-Renaissance into the early-Baroque, and its implications for brass playing traditions—including the decline of the cornett, the rise of the trumpet, as well as the addition of the horn into the realm of art-music—it is fascinating to observe how the pedagogical traditions of cantabile-singing through the instruments, so strongly associated with the Renaissance, carried over into the evolutionary developments rapidly taking place throughout

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<sup>57</sup> Cesare Bendinelli, *The Entire Art of Trumpet Playing* (1614), trans. and ed. Edward H. Tarr, The Brass Press (Vuarmarens: Editions BIM, 1975).

<sup>58</sup> Girolamo Fantini, *Method for Learning to Play the Trumpet in a Warlike Way as well as Musically* (1638), trans. and ed. Edward H. Tarr, The Brass Press (Vuarmarens: Editions BIM, 1975).

the seventeenth-century. Both Bendinelli and Fantini epitomize these trends.

Although Bendinelli's *Tutta l'arte della trombetta*, largely focuses on how best to produce and achieve the ceremonial repertoire associated with the trumpet-playing that would have been central to his position as a principal trumpeter in the courts of Vienna (from 1567-80) and Munich (from 1580-1617), it is also one of the earliest trumpet treatises to discuss how to successfully navigate the *clarino*-range (i.e. the highest tessitura) of the natural-trumpet.

Bendinelli—with remarkable succinctness, and with sage advice that reverberates to this day—opens his treatise with a knowledge-packed description of 1) how best for a student to set up their embouchure and trumpet position in order to achieve success and accuracy in all ranges of the instrument, and 2) the importance of mastering flow and flexibility on the trumpet *before* embarking on the study of the repertoire:

Whoever wishes to learn to play the trumpet and to understand the present work, in order to use it for his needs, must first be healthy and possess a good constitution, good teeth, and a good chest. If he wishes to begin playing, he should place the trumpet gracefully on his mouth, whereby attention should be paid to the fact that that trumpet's bell should stay in a quite horizontal position, pointing neither upwards nor downwards. He should avoid puffing up his cheeks, as it is a terrible vice and deforms the player's embouchure. He should learn then to lead his chin together with the notes of each register—this is called “accenting the trumpet” and gives it elegance.<sup>59</sup> When the pupil has succeeded in this, and knows how to play all the notes well, he can then learn to sing and play by means of the tongue, whereby it does not matter whether the tongue is reversed, direct, double, pointed, or otherwise, as long as the player finds it easy and becomes used to it, because he will then be able to investigate his instrument and pass over to matters of greater importance.<sup>60</sup>

It is worth underscoring just how timeless and valuable Bendinelli's advice is here. Particularly germane for the discussion of lyrical-flow, is his instruction that only when a student *knows how to play all the notes well*, should that student *learn to sing and play by means of the tongue*. As every skilled brass-pedagogue knows: one of the central concepts to playing with professional

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<sup>59</sup> Tarr suggests that this recommendation is akin to the modern brass-playing approach of smooth micro-adjustments of the angle of the instrument to the embouchure, in order to allow for seamless shifting between registers. Tarr's assumption that this is indeed Bendinelli's implication resonates for me also, particularly given how accurately the rest of Bendinelli's advice conforms to modern approaches.

<sup>60</sup> Cesare Bendinelli, *The Entire Art of Trumpet Playing* (1614), 4.

facility on any brass instrument is mastering seamless connection between notes through expert control of the wind (*a good chest*), and smooth navigation between partials on the overtone series (“*accenting the trumpet*”), ideally without the tongue obstructing the flow of the sound.

Obstruction of the resonate air-space in a brass player’s oral cavity, via a misplaced tongue, is a nearly universal mistake that occurs when inexperienced brass players are first learning how to articulate (i.e. *by means of the tongue*).

Thus, Bendinelli argues that only once a student has become lyrically proficient through a legato approach in all registers should they then proceed to master the language of articulation (*whether the tongue is reversed, direct, double, pointed, or otherwise*) that is required for playing the ceremonial calls and other trumpet repertoire expected from the seventeenth-century court-trumpeter. Undoubtedly, only a master-player and pedagogue publishing a methodology for brass playing at the very end of his career, could so brilliantly describe how essential these pedagogical fundamentals of lyricism and sound production are for excelling on a brass instrument.

At the end of this same preface, Bendinelli emphasizes that once articulation is added to the pedagogical mix, and even (or especially) when a trumpet student is learning the fanfares of military calls, one’s playing should always be approached with a cantabile, singing style:

The military signals and tocattas are to be performed briskly, *in a singing manner*, and with little regard for the beat<sup>61</sup>, but well tongued, in order that one can hear what is being played; and it doesn’t matter if the player is half a bar ahead or behind.<sup>62</sup>

Like the cornett treatises published a generation before, and like the numerous excellent brass methodologies that have come down to us through the ages, Bernidelli’s insistence that the foundation of great brass playing lies in a production of sound that emulates and is inspired by the lyrical flow of a human voice “in a singing manner” illustrates that a pedagogical approach of lyrical flow has been paramount to brass playing fundamentals for well over four-hundred years.

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<sup>61</sup> Tarr elucidates (in his notes on page 12 of the same volume) that indeed the performance practice of military signaling of the time was executed with a free approach to phrasing and time. This, of course, would allow even more mental focus to be placed on approaching the calls with singing lyricism.

<sup>62</sup> Cesare Bendinelli, *The Entire Art of Trumpet Playing (1614)*, 4.



Figure 3: Bendinelli's Trumpet<sup>63</sup>



Figure 4: Woodcut Portrait of Girolamo Fantini (1636)<sup>64</sup>

Girolamo Fantini was an eighteen-year-old the year Bendinelli published his treatise on “The Entire Art of Trumpet Playing (1618)”. If Bendinelli represents the generation (like Gabrieli, Dalla Casa, and Bassano), who brought the brass traditions of the High-Renaissance to its epochal close, then Fantini exemplifies the new generation of early-Baroque era musicians who were evolving the classical tradition, and the instrumental styles that accompanied it, towards a decidedly new baroque destination. Of course, these developments and evolutions were organic, multifaceted, and occurred over generations—and the labels we apply to these eras are, of course, determined after the fact through the lens of historical hindsight—but nevertheless they

<sup>63</sup> Bendinelli's unique “pretzel shaped” trumpet, which allowed for bell-stopping technique (as would become standard in natural-horn playing technique) made by Anton Schnitzer in 1585, now housed in the library of the Acaemia Filharmonica, Verona.

<sup>64</sup> From the opening pages of Fantini's *Method for Learning to Play the Trumpet in a Warlike Way as well as Musically* (1638), 6.



are helpful in organizing clear shifts in performance-practice and styles that were occurring during the first half of the seventeenth-century.

Of significant historical-note for Fantini—who from 1631 spent much of his performance career as the Principal Court Trumpeter in the court of Grand Duke of Tuscany, Ferdinando II (1610-70)—was known to have played a solo recital for trumpet, accompanied by the great early-Baroque composer and organist, Girolamo Allessandro Frescobaldi (1583-1643), in the summer of 1634 on Cardinal Scipione Borghese's (1577-1633) house organ in Rome. This is the first documented performance of a solo trumpet performance accompanied by a keyboard instrument in the historical record,<sup>65</sup> information that comes down to us in the form of a correspondence between the French physician-philosopher Pierre Michon Bourdelot (1610-85), and the French polymath (mathematics, and the study of acoustics, amongst his fields of inquiry) Marin Mersenne (1588-1648), who shortly after hearing of Fantini's performance via Bourdelot, wrote:

But when one continues to descend from the third to the second note [i.e. harmonic or partial] one makes a passage of a minor third, and though it is very difficult before one touches the third note, a difficulty that the multitude of trumpeters cannot overcome, I believe that the best trumpeters can so regulate the breath so as to emit all the individual tones from the third or fifth ascending, that is, they may ascend by step. This idea was strongly confirmed in a letter sent to me from Rome by Mr. Bourdelot, a most skilled physician, in which he affirms to have heard Girolamo Fantini, the most excellent trumpeter in all of Italy, play with his trumpet *all of the notes*, and who united to those notes those of the organ of Cardinal Borghese, while this was played with elegance by Girolamo Frescobaldi, organist of the Duke of Etruria and of the Roman church of San Pietro. I say this notwithstanding that the trumpeters of the Duke of Crequi, who was then extraordinary ambassador of our most Christian King Louis XIII, have asserted that the notes played by the above-mentioned trumpeter had been false, confused, and entirely disordered. However this may be, and whether these passages may be reason for which the above-mentioned intervals are not so easily played are worthy of investigation, so that some-one may finally learn the cause of such an extraordinary phenomenon.<sup>66</sup>

Trumpet-envy from the “trumpeters of Duke of Crequi” aside, Mersenne relays that Doctor Bourdelot was clearly impressed by the “extraordinary phenomenon” of hearing a trumpet play

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<sup>65</sup> Edward Tarr, *The Trumpet* (Portland: Amadeus Press, 1988), 121-23.

<sup>66</sup> Lewis, Shelby Allen, "Fantini and Frescobaldi in Rome, Circa 1634: A Study of Context and Practice" (DM diss., Louisiana State University, 2014), 33-4.

diatonically (*with all of the notes*) in the clarino register. Mersenne describes, with a scientific curiosity, the physics of playing on the upper notes of the overtone series which makes it possible for the natural-trumpeter to execute the clarino register, and, with a poet's empathy, the thrilling beauty that the attendant audience witnessed in the *extraordinary phenomenon* of one of the first performances of a solo brass sonata.

Forty years earlier, Gabrieli used the terminology, *canzona per sonare*, literally a “song for playing” to describe the instrumental music he was adapting out of the secular French art song tradition (i.e. a chanson, or in Italian a *canzon*). Gabrieli also utilized the terminology, *sonata* (i.e. such as in his famous *Sonata pian e' forte* (1597)) and appears to be the first composer to utilize this term to describe a piece of instrumental-music<sup>67</sup>. Akin to *per sonare*, the Italian word *sonata* literally means “to sound”. “Sonata,” of course, would evolve in meaning, form, and function throughout the Baroque to become *the* archetypal instrumental form by the Classical Era (1730-1815), but the *essence of its meaning* is rooted in in the history of seventeenth-century brass music, and its own intimate connection with the vocal tradition.

Within decades after Gabrieli's first usage, the term *sonata* became ubiquitous with instrumental music, particularly when it prominently featured a solo instrument. We can be certain that Fantini's 1634 joint-recital with Frescobaldi was not an isolated solo-sonata performance for him, in part, because in *Modo per Imparare a Sonare di Tromba*, published only four years later, Fantini includes, 1) “Nine Trumpet Duets,” 2) “Eight Sonatas for Trumpet and Organ,” and 3) “70 Pieces for Trumpet and Continuo”. The *Eight Sonatas for Trumpet and Organ* are the first of their kind in history<sup>68</sup>, and albeit brief in length, are remarkable for their balanced tripartite-forms (including middle dance sections in triple-meter), and the recitative-arioso formats of the outer movements.<sup>69</sup> The connections with early-Baroque opera trends are

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<sup>67</sup> Timothy Roberts, liner notes to *Giovanni Gabrieli*.

<sup>68</sup> As Tarr points out in Girolamo Fantini, *Method for Learning to Play the Trumpet in a Warlike Way as well as Musically* (1638), 14.

<sup>69</sup> Ibid.



unmistakable, and demonstrate once again, that despite greater independence as instrumental musical art in the mid-seventeenth-century, the inspiration and mode of expression for brass-playing was still deeply rooted in the Renaissance vocal traditions that they sprung out of.

The Baroque era ushered in a golden age for solo natural-trumpet playing that would only be matched in the late nineteenth- and throughout the twentieth-century, *after* the invention of valve systems (i.e. from ca. 1814). One of the amazing aspects of looking back to the Baroque era is that given the virtuosity required to perform the solo trumpet repertoire of the Baroque on modern valve-trumpets (with their comparatively superior efficiency)—the level of brass musicianship would have been nothing short of astounding in order to realize and convincingly perform the florid clarino-registered scores of the leading Baroque-era composers on a *natural*-trumpet. The fact that there is a copious amount of solo repertoire for the instrument from the period speaks both to the profound importance of the instrument to the Baroque aesthetic, and to the diligence of study that a professional-level trumpeter of the era would have had to attain to be able to successfully perform this repertoire.

The Baroque solo-trumpet tradition that Fantini helped initiate would be taken up by future generations of Baroque trumpet artists throughout Europe and would inspire some of the most important composers in music history to write some of the most significant repertoire in the entire brass canon. A few of the significant trumpeter/composer collaborations include: Giovanni Pellegrino Brandi (d. ca. 1700), the leading trumpeter at the Basilica of San Petronio, in Bologna, who inspired composer (and music director at San Petronio) Giuseppe Torelli (1658-1709) to write over thirty trumpet concertos<sup>70</sup>; Johann Christoph Pezel (1639-94), Leipzig based trumpeter, *Stadtpfeifer*, and composer in his own right, who was succeeded by Gottfried Reiche (1667-1734), and who would serve under the direction of Johann Sebastian Bach, and for who Bach composed many of his greatest works featuring brass—including his Brandenburg Concerto No.

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<sup>70</sup>Elisa Koehler, *A Dictionary for the Modern Trumpet Player* (Lanham, MD: Rowman & Littlefield Publishers, 2015), 52-3, accessed February 16, 2018, ProQuest Ebook Central.

2, BWV 1047 (which famously features some of the most virtuosic trumpet playing in the repertoire); Englishmen John Shore (ca. 1662-1752), appointed Trumpet-in-Ordinary to James II (1633-1701), in 1688, inventor of the tuning fork, and who would inspire Henry Purcell (1659-95), to write some of the composer's most daring orchestral-brass writing, and finally, Valentine Snow (ca. 1700-70), for whom George Frederic Handel wrote the well-known obbligato trumpet parts in the oratorios *Messiah*, *Samson*, and *Judas Maccabaeus*, the "Dettingen" *Te Deum*, and the military-band suite, *Music for the Royal Fireworks*.<sup>71</sup>

Like Bendinelli, Fantini opens his trumpet treatise and methodology, *Modo per Imparare a Sonare di Tromba* (1638), with a succinct (most of which is excerpted below), yet highly illustrative preface. He addresses the great strides the artistic level of natural-trumpet playing had been making in previous decades, advising that his method is for serious brass-musicians who would like to learn to play trumpet, *not in hit-or-miss fashion, as was done in the past, but with a true foundation*. Importantly, he believes the level of trumpet artistry should match that of other *perfect* instruments (i.e. instruments *not* limited by the harmonic overtone series, as is the case with the natural trumpet)<sup>72</sup>, despite its perceived inherent limitations. This transcendent, affirming encouragement, combined with the previous sentence's work-ethic challenge (i.e. to go beyond simply "hit-or-miss" fashion) displays a truly inspirational underlying pedagogical philosophy.

Underscoring that his methodology is intended for serious brass players seeking to study art-music, Fantini explains that his method is *for those who would like to learn to play **musically*** (thus allying the burgeoning natural trumpet methodologies with the already more established "musical" cornett tradition), and proficiently *in an ensemble of voices or with other instruments*.

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<sup>71</sup> Husk, W.H., and Edward H. Tarr. "Snow, Valentine." *Grove Music Online*. 16 Feb. 2018. <http://www.oxfordmusiconline.com.libproxy1.nus.edu.sg/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000026052>.

<sup>72</sup> As suggested by Tarr in Girolamo Fantini, *Method for Learning to Play the Trumpet in a Warlike Way as well as Musically* (1638), 17.

Perhaps building on Bendinelli's advice—that one should establish excellent sound production before mastering articulation—Fantini asserts the importance of *using a pointed tongue* in order to create an organic balance between articulated passages and legato playing, *since blowing with the breath alone* does not produce a good effect. Insightful also, is one of brass literature's first breathing exercises: that *one should breathe on the dot*, i.e. that the musical phrase (and its rhythm) should not be disturbed by arrhythmical breathing.

### **The Author to His Readers**

I have sent to the press this insignificant volume of mine for the benefit of those who play the trumpet, or would like to learn to play it—not in hit-or-miss fashion, as was done in the past, but with a true foundation, just as with the other, perfect instruments, even though the trumpet does not have other pitches other than the harmonic series, as are shown at the beginning of this work. No greater effort could have been made to write for the said pitches, avoiding all others; and so the reader must be content with those pitches already mentioned, which in themselves bring little fascination, just as many bass parts are left without diminutions, because to play such an instrument [i.e. trumpet], a solid harmonic foundation is needed. Accept this work with good will, for in having done so, you may have other works from me in the future; but I leave myself to your good judgement.

### **Instructions for those who would like to learn to play the trumpet musically, in an ensemble of voices or with other instruments**

Players of this instrument should sound it using a pointed tongue, since blowing with the breath alone does not produce a good effect. Let it be known that wherever in the following pieces dotted notes occur, one should breathe on the dot, according to the context or the disposition of the player of said instrument. Finding a *grosso*<sup>73</sup>, one should articulate it with a pointed tongue, whereas the *trillo*<sup>74</sup> is performed with the strength of the chest and articulated with the throat, and can be executed on all the pitches of said instrument . . . It must also be pointed out that whenever notes of one, two, or of four beats' length be found, they should be held in a *singing* fashion, by starting softly, making a crescendo until the middle of the note, and then making a diminuendo on the second half of the note until the end of the beat<sup>75</sup>, so that it may hardly be heard; and in doing this, one will render perfect harmony.

Lastly, Fantini's discussion of early-Baroque ornamentation methodology, including his description of the vocal *messa di voce* technique is an invaluable insight into the fundamentals of

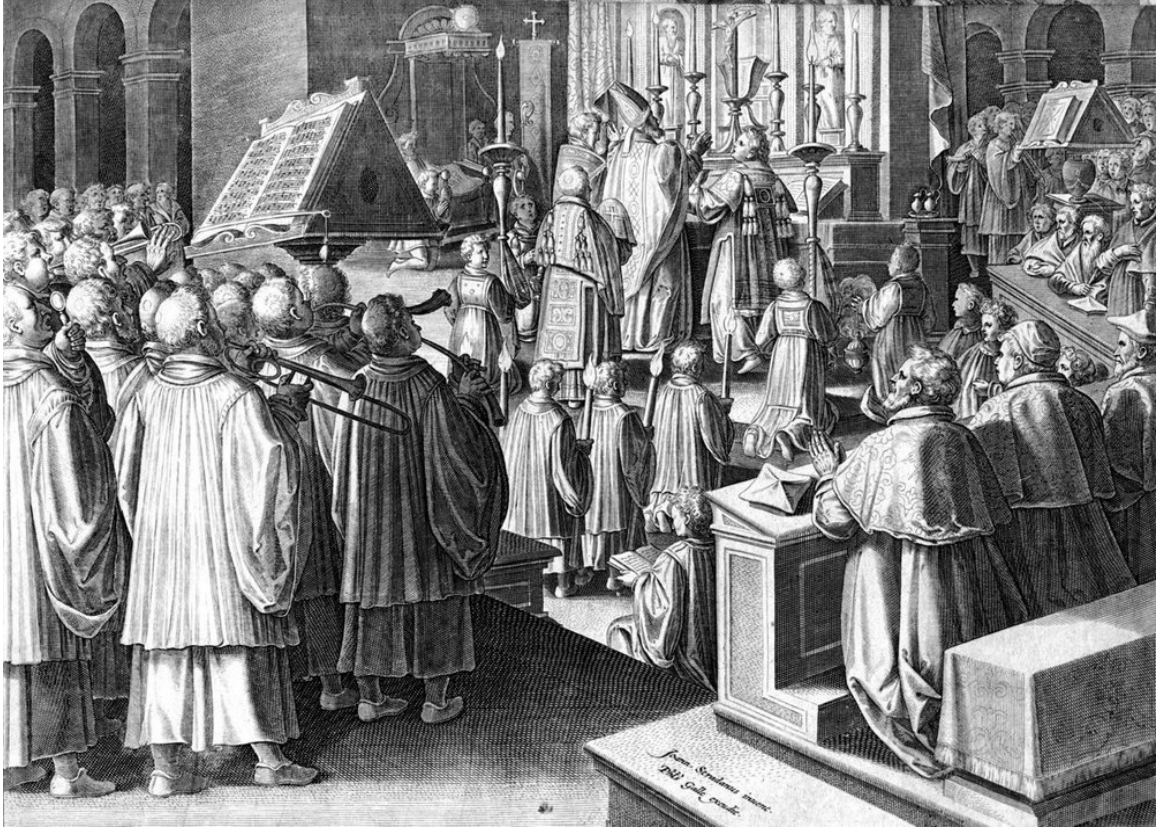
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<sup>73</sup> An articulated trill.

<sup>74</sup> A *trillo* in the first half of the seventeenth century is a throat articulation, similar to the *gorgia* articulation described above; essentially a trill on a single note (rather than alternating between two pitches).

<sup>75</sup> Fantini is describing the vocal phrase technique known as *messa di voce*, i.e. "placing of the voice," here.

musical phrase building, and alludes to the fact that although brass instrumental art was coming into its own, its deep connections to two-hundred years of lyrical flow via the polyphonic and polychoral traditions of the Renaissance had forever made its indelible mark on the tradition of brass-playing.



**Figure 5: Cornetts and trombones in a polychoral performance. Engraving by Philippe Galle after Johannes Stradanus (1523-1605)<sup>76</sup>**

<sup>76</sup> Bruce Dickey, “Cornettomania” from a collection of Cornett iconography, accessed February 13, 2018, <http://www.bruceDickey.com/cornetto-iconography/>.

**A Select Historiography of Technical Flow Applications  
in Brass Literature of the Classical and Romantic Eras**

Count von Sporck, and the *Cor de Chasse*

Although the seventeenth-century early-Baroque era saw a decline in brass-instrument playing associated with the *sacred* music of the Renaissance (particularly the cornett and the trombone), it witnessed a dramatic rise in brass-instrument practice and performance associated with *secular* traditions (especially in the development of trumpet-playing artistry), as well as the first significant entrance of the *jagd- or wald-horn* (*hunting- or forest-horn*) into the classical-tradition. This was particularly true in orchestral and operatic settings. Indeed, rustic-programmatic evocations of the horn's original utilitarian functions were included as fanfares and hunting-calls in staged musical works including the operas *Erminia sul Giordano* (1633) by Michelangelo Rossi, *Le nozze di Teti e di Peleo* (1639), by Francesco Cavalli, and most famously the ballet, *La Princesse d'Elide* (1664) by Jean-Baptiste Lully, in which on-stage hunters, playing horn-calls are part of the dramatic action.<sup>77</sup>

One of the figures we have to thank for securing the horn a spot in the classical tradition is the Bohemian Count, Franz von Sporck (1662-1731). Sporck who, besides being an avid hunter, was a lover and patron of the musical-arts and traveled extensively throughout Europe as a young nobleman (between 1780-82), including a stop at the French court of Versailles. At Versailles, Sporck became so enthralled with the sound of their hunting-instruments (both in the fields and on the stage), that upon returning to Bohemia sent two of his horn-playing huntsmen, Wenzel Sweda (1638-1710) and Peter Röllig (1650-1723) back to the French court for musical training. It was likely that the warmer sonority of the longer (and thus deeper-sounding), large-belled French instruments (pitched in F)—compared to the brighter sounding, shorter, tightly-coiled German instruments—that so impressed Count von Sporck.

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<sup>77</sup> Thomas Hiebert, "The horn in the Baroque and Classical periods," in *The Cambridge Companion to Brass Instruments*, ed. Trevor Herbert and John Wallace (Cambridge: Cambridge University Press, 1997), 103.



**Figure 6: Natural horn in F by Johann Carl Kodisch, Imperial City of Nürnberg, 1684.<sup>78</sup>**

Indeed, it was through Sporck's patronage of his Bohemian court-orchestra and opera company—which eventually included among its instrumental cohort this kind of French *cor de chasse* (horns for hunting)—that first introduced the larger open-coiled instrument in central Europe; a trend that catalyzed the establishment of the French *cor de chasse* as the preferred type of horn for art music throughout the entirety of Europe. It is no accident that shortly after Sporck's return from Versailles, that instrument makers in Nuremburg began making copies (in the 1680s) of the French-styled horns.<sup>79</sup> Incidentally, also around this same time, the *cor de chasse* was also becoming popularized in England, where it became known as the “french horn”.<sup>80</sup>

<sup>78</sup> The type of horn Sporck encountered in Versailles, and brought back to Bohemia. “Horn in F by Johann Carl Kodisch, Imperial City of Nürnberg, 1684,” Images from the Utley Virtual Gallery. Accessed February 20, 2018, <http://collections.nmmusd.org/UtleyPages/Horns/Kodisch/NaturalHorn.html>.

<sup>79</sup> (See figure 7). John Humphries, *The Early Horn, A Practical Guide*, (Cambridge: Cambridge University Press, 2000), 7.

<sup>80</sup> Hiebert, “The horn in the Baroque and Classical periods,” 103.



**Figure 7: Portrait of Gottfried Reiche (1667-1734) by Elias Gottlieb Haussmann (1723) with inset-enlargement of his well-known (and only extant) *Ablassenstück* (aka theme of *CBS Sunday Morning*)**

It would be nearly a century before the important hand-in-the-bell stopping-technique would allow horn-players to greatly expand the instrument's technical possibilities, particularly in the low register; but in the interim *Stadtpfeifer* throughout German lands—including one of the most important brass-performers associated with J.S. Bach, Gottfried Reiche—continued to expand the high-horn's expressive range via the playing of his more traditionally German, *jagdhorn* (aka in Italian as *corno di caccia*, i.e. “horn for the chase”), with its more tightly-coiled wrap.

Reiche, in his formative years, benefited from the extensive training that was encouraged by the musicians-guild in Saxony (the *Instrumental-Musikalischen Collegium*) who in 1653 had passed twenty-five articles, ratified by Emperor Ferdinand III, outlining the requirements to become a professional musician. The minimum apprenticeship for a musician was two-years; however, to become a *Stadtpfeifer* (where a musician was expected to master multiple wind-

instruments, e.g. cornett, natural-trumpet, and horn for a brass-playing specialist) the apprenticeship was a considerably longer minimum of at least five-years, as stated in Article 12:

And to the end, that a perfect musician, may have been taught many instruments, some *pneumatica* and some *pulsatilia* [i.e. mastery of the brass and wind techniques], and be practiced in them, no apprentice shall be free under five years, that he may be experienced in his art and acknowledged as skilled.

Reiche, raised in nearby Weissenfels, began studying in Leipzig as a journeyman *Stadtppfeifer* in 1688, as a twenty-one year old, and by 1700 had risen through the professional-hierarchy to become a full-time professional municipal-musician. Having established himself as one of the most important wind-players in Leipzig, Reiche became a full-fledged senior *Stadtppfeifer* in 1706 filling the vacancy created by the death of one of his predecessors, Tobias Gentzmer.<sup>81</sup>

Although Gottfried Reiche was certainly not the only excellent brass player in the region of his day, he was certainly one of the most celebrated. Even throughout the twentieth-century (in part because of the famous Elias Gottlieb Haussmann portrait of 1723), historians heralded Reiche as “Bach’s-*trumpeter*,” and indeed he was that, but perhaps more accurately (and more expansively), he should be remembered as Bach’s “*brass-playing-soloist*” or most accurately, simply as Bach’s “*Principal Stadtppfeifer*”. As the famous Hassmann portrait attests, with Reiche proudly displaying his *Ablassenstücke* in his left-hand, and a *jagdhorn* (or *corno di caccia*) in his right-hand, it is plausible that the *corno di caccia* (i.e. not the natural-trumpet), was his favoured instrument. Yet more germane, due to his extensive training, Reiche was likely an expert at multiple brass instruments. With this in mind, it is not inconceivable that on some occasions Reiche would have been responsible for playing lead clarino-trumpet parts, and at other times have been responsible for the high descant-parts required of Bach’s virtuosic horn writing, undoubtedly performing these unique duties on a variety of different brass instruments.

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<sup>81</sup> Timothy A. Collins, “Gottfried Reiche: A More Complete Biography,” *Bach*, Vol. 19, No. 3 (Fall, 1988), 4-7.



At a time when horns and trumpets were going through a number of transformations (and when the differences that distinguished them from each other were often nebulous), and when the technique of hand-stopping on the horn had yet to be fully developed—the primary technique of playing virtuosic high-melodies (as required by Bach and numerous Baroque-era masters) on natural trumpet or horn—demanded that the player in *either* case be technically-fluid, and able to navigate the upper tessitura of the harmonic overtone-series on whichever brass instrument they happened to be performing. As is the case to this day, playing Baroque-era trumpet and horn repertoire requires a considerable amount of talent, physical stamina in the upper-range of the instruments, and most importantly, the kind of extensive brass-playing training that Reiche had clearly acquired—in part, because of the rigors first established in Saxony’s *Collegium Musicum* in 1653.

By the mid nineteenth-century, when Felix Mendelssohn (1809-47) would found, in 1843, the *Conservatory of Music*, as well as take up leadership of the *Gewandhaus Orchestra*, Leipzig had already established deep and rich musical roots leading back at least a century earlier. Under the auspices of composers like J.S. Bach, and master-performers like Gottfried Reiche—both who had greatly benefitted from the pedagogical infrastructure and community of the *Collegium Musicum*, Leipzig had already established itself as one of the centers of the German classical mainstream. The importance of the musical and pedagogical symbiosis established in the Leipzig *Collegium* was already noted by important thinkers of the time including Johann Heinrich Zedler (1706-51), who compiled one of the first comprehensive encyclopaedias—the *Grosses Universal-Lexicon* (i.e. Great Universal Lexicon) in 1739—and specifically referenced Leipzig and it’s foremost composer, Bach, as exemplars when defining institutions of higher musical learning:

***Collegium Musicum***: an assemblage of certain musically knowledgeable persons, who, according to their individual training in vocal as well as in instrumental music, come together at a particular time, at a particular place, and under the supervision of a particular director in order to perform musical compositions. One comes across collegia of this sort in various places. Of all others, at Leipzig, the Bach *Collegium Musicum* is the most renowned.<sup>82</sup>

### Mozart, Beethoven, and Giovanni Punto

In fact, Leipzig was just one of a number of German-speaking cities promoting and evolving excellence in Baroque-era brass-playing and pedagogy. In Dresden, one-hundred-twenty kilometres southeast of Leipzig (and halfway to the Bohemian capital of Prague), there were a number of factors contributing to a significantly different school of brass-playing thought than what was being professed at Leipzig's *Collegium Musicum*, namely 1) the *Dresden Trumpeter's Guild* forbade its members to double on the horn (which, by some was still considered a purely utilitarian instrument)—thus, by necessity (and by decree!) individuated and segregated the performance-practice of horn- and trumpet-playing and its practitioners and 2) the presence and influence of two Bohemia-trained “French-styled” horn players from Prague, Anton Joseph Hampel (1710-71), and Carl Haudek (1721-1802).<sup>83</sup>

Hampel an expert of low-horn<sup>84</sup>, and Haudek a master of high-horn playing, distinguished themselves not only as excellent horn-duo performers, but co-established a school of horn-playing that greatly expanded hand-stopping technique (in part facilitated by the shape and bell-size of Sporck's horns, originally imported from France) by the beginning of the Classical-era, in middle of the eighteenth-century.

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<sup>82</sup> Don L. Smithers, “Bach, Reiche and the Leipzig Collegia Musica,” *Historic Brass Society Journal*, Vol. 2 (1990), 3-4. Also indicates what a compelling influence J.S. Bach had on the community, particularly given that it was actually Georg Philipp Telemann (1681-1767), Bach's predecessor, who first established the Leipzig *Collegium*.

<sup>83</sup> Humphries, *The Early Horn, A Practical Guide*, 9-10.

<sup>84</sup> And also the inventor of the “*Inventionshorn* (c1753), on which crooks of varying lengths were inserted into the middle of the body of the instrument rather than the mouthpipe end, thus allowing the distance between horn and player to remain constant regardless of the crook used.” A significant modernizing development for the natural-horn. See Grove Online, “Hampel, Anton Joseph” article: <http://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000012292?rskey=XJWLQ7&result=3>

The historical influence of Hampel and Haudek is immeasurable, particularly given that Bohemia in the next generation produced another highly-influential horn player, Jan Václav Stich (1746-1803), who travelled to Dresden to study with both horn masters, and who would go on to spread Hampel's and Haudek's methodologies far-and-wide. Better known as *Giovanni Punto* (Stich's Romanised name), Hampel's and Haudek's student would go on to become the first international-soloist on the horn in classical-music history—exhibiting his virtuosic ability to playing fluidly and chromatically (in part, through Punto's mastery of Hampel's hand-stopping technique) throughout Europe and England (from 1768);<sup>85</sup> thus demonstrating the horn's potential for the kind of technical-flow already possible on contemporary string and woodwind instruments. Along the way, Punto also inspired leading composers' interest in the instrument, including Wolfgang Amadeus Mozart (1756-91), who writing to, Leopold, his father (from Paris, in 1778) noted that “Punto bläst magnifique”<sup>86</sup>; and Ludwig van Beethoven (1770-1827) who composed his Op. 17 *Horn Sonata in F-Major* for the virtuoso, and even accompanied maestro Punto at the premier performance of the *Sonata* in Vienna, on April 18, 1800.



**Figure 8: Copperplate image: Giovanni Punto (1782)**

<sup>85</sup> Humphries, *The Early Horn, A Practical Guide*, 12.

<sup>86</sup> This is particularly noteworthy given that Mozart would go on to write major-cornerstones of the solo horn repertoire throughout the 1780s (including the four horn concerti) for his friend, Viennese horn-virtuoso (and less-travelled (but no less significant) contemporary of Punto), Joseph Leutgeb (1732-1811).

In addition to his virtuosic performance career, Punto also contributed significantly to the pedagogical development of the horn through publication and dissemination of Hampel's horn method: *Seule et vraie méthode pour apprendre facilement les élémens des premier et second cors ... composée par Hampl et perfectionnée par Punto, son élève* (Paris, 1794) (*The one and true method for easily learning first and second horn technique, composed by Hampel and perfected by Punto, his student*). Aside from *The Compleat Tutor for the French Horn* (London, c. 1746), which was primarily aimed at amateur musicians (incidentally, likely written by a Mr. Winch, a *Bohemian* hornist who had recently settled in England, just as the instrument was beginning to blossom in popularity<sup>87</sup>)—Punto's publication of Hampel's method marked a significant leap in horn methodologies (and brass methods more generally) in its breadth and scope. Interestingly, as the title suggests, the entire eighty-seven page volume is written in duo form (with the large majority of the duo-etudes in triple, or compound meters: overtly signalling the instruments' important hunting origins), and illustrating how thoroughly Hampel and Haudek explored (and evolved)—some fifty-years previously—the important high-horn (*cor alto*) and low-horn (*cor basse*) symbiosis: a performance and compositional practice that would become central (and standardized) in Classic-Romantic era orchestral horn-writing.

Perhaps even more significantly, Punto's most important student, Heinrich Domnich (1767-1844) who was appointed as horn player to the Paris Opera in 1787, would go on to be the inaugural Professor of *Cor Basse* at the *Paris Conservatoire*, when it first opened its doors in 1795. This professorship, which Domnich held until his retirement (in 1817), not only assured a lasting influence of the Bohemian horn-playing tradition in the *Conservatoire* brass-pedagogy, but also brought full-circle—in geographical terms—the historical influence first established in Versailles, and passed to Count Sporck, nearly one-hundred-fifty years previously.<sup>88</sup>

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<sup>87</sup> Hiebert, "The horn in the Baroque and Classical periods," 108.

<sup>88</sup> Humphries, *The Early Horn, A Practical Guide*, 10.

Like Punto before him, Domnich continued to evolve horn methodology with his *Méthode de Premier et de Second Cor* (1808), including a multi-section volume that would serve as an influential model not only for future *horn* methodologies such as Dauprat's (1824), but also for the other highly influential brass-methods coming out of the Paris Conservatory throughout the nineteenth-century such as the methods by Dieppo (1835) for *trombone*, and Arban (ca. 1859) for *cornet*. The main body of Domnich's *Méthode* is divided into three sections: "The first contains short essays on various topics: tone, embouchure, transposition, the use of the right hand, and a variety of musical ornamentations; the second gives progressive exercises for first and second horn, with a guide as to the order of study depending on the student's specialty; and the third section focuses on longer etudes, which are categorized according to range for first or second horn, or both."<sup>89</sup>

In the introduction to his method, Domnich also offers a brief history of the horn, including historically-significant remarks tracing his own pedagogical lineage back to Hampel (via Punto)—whom he credits for "inventing" horn hand-stopping technique. Although it is doubtful that Hampel was the sole "inventor" of this evolutionary-essential technique, Domnich's narrative certainly underscores the significance of the Saxon-Bohemian horn-school—whose influence forever transformed the technical possibilities of the natural-horn—and that would set a high-artistic bar for all brass instruments evolving during the Classical and Romantic eras.

#### Anton Weidinger, Hector Berlioz and the Modernizing of Brass Instruments

In the second half of the seventeenth-century, just as horn-players were mastering the hand-stopping technique that would greatly enhance the instrument's technical and musical possibilities, *trumpet*-players and makers were experimenting with systems that would allow them to play chromatically (just as Punto or Luetgeb had achieved on the horn) in all registers.

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<sup>89</sup> Evan G. Chancellor, "Heinrich Domnich: A Discussion of his Career, Pedagogy, and Concert Works for the Horn" (DMA diss., University of Oklahoma, 2014), 21.

Undoubtedly, this was fueled out of a shared aesthetic conundrum: the desire to assimilate into the brass-instrument family the kind of technical-flow, *in all registers*, that was already becoming firmly established through the mechanical-engineering of the instruments—and with the performance-practice of the professional-player—of the string, woodwind, and keyboard families of instruments during the late-Classical era.

It would not be until ca. 1814 when Heinrich David Stölzel (1777-1844), a German horn-player, developed the first modern-valve prototypes, in Berlin, that would ultimately lead to the kind of valve-systems we have on all brass instruments today. In the meantime, however, brass-instrument makers experimented with *keyed*-systems, similar to those already found on woodwind instruments. This would evolve, by the first-quarter of the nineteenth-century, to an entire soprano-alto-tenor-bass *keyed-bugle* family of brass instruments—including the bass-*ophicleide*, an instrument that helped pave the way for the first modern *valved*-contrabass brass-instrument, the tuba, to enter the classical-mainstream. The tuba—like the modern valve systems that made a contrabass brass-instrument feasible—was first developed in Berlin; and was first patented by Wilhelm Friedrich Wieprecht (1802-72), and Johann Gottfried Moritz (1777-1840), on September 12, 1835.<sup>90</sup>

This modern brass-instrument evolution was first initiated by experimentation with *keyed-brass* instruments, in the 1760s, by two Bohemian horn players working in St. Petersburg—Ferdinand Kölbel and his son-in-law Hensel,<sup>91</sup>—who co-designed a horn with keys on the bell, and on a cross-tube. The two players successfully demonstrated the potential of the instruments in a concert (praised by all in attendance)<sup>92</sup> for Tsarina Katharina II (in November 1766), featuring horn-duos, accompanied by a basso-continuo playing cellist. However, likely due to the

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<sup>90</sup> “Contrabass tuba,” Vienna Symphony Library, accessed February 20, 2018, [https://www.vsl.co.at/en/Contrabass\\_tuba/History](https://www.vsl.co.at/en/Contrabass_tuba/History).

<sup>91</sup> John Ericson, “Keyed Horns and Slide Horns,” The Early Valved Horn, accessed February 20, 2018, [http://www.public.asu.edu/~jjerics/keyed\\_slide.htm](http://www.public.asu.edu/~jjerics/keyed_slide.htm).

<sup>92</sup> Reine Dahlqvist, *The Keyed Trumpet and Its Greatest Virtuoso, Anton Weidinger* (Vuarmarens: The Brass Press, Editions Bim, 1975), 4.

compellingly successful technical-inroads already being established with Hampel's hand-stopping technique, Kölbel's keyed-horn never gained wide-acceptance.<sup>93</sup>

The keyed-trumpet, however made a much more lasting historical impact. In a retrospective entry from Ernst Ludwig Gerber's (1746-1819) *Neues Historisch-biographisches Lexikon der Tonkünstler* (1812)—the second edition of his early nineteenth-century music-encyclopedia—we are given some insight into the development of a keyed-trumpet prototype—similar to the kind of instrument that would eventually find its way into the hands of Anton Weidinger (1766-1852)—its most renowned early practitioner. According to Gerber's account, it was a Cristoph Friedrich Nessmann, a gold- and silversmith in Hamburg, and an amateur musician, who in 1793 devised a successful key-system for the trumpet:

Nessman, in 1793, a still young-man of talent, had already developed an uncommon skill on one of the most difficult instruments, the trumpet. Not being satisfied with this, as a skilful mechanic, he perfected this instrument through repeated attempts, so much—through keys hidden under the [trumpet's cotton-corded] binding—that he could play in the one-line octave (which otherwise contains only the tones c', e', g', and c'') all the semi-tones: c', c#', d', d#', e', f', f#', and so on up to c''. This he did in tune and with ease, even in rapid passages; and I myself witnessed the good effect of this technique at that time, particularly when he played the second part to young Westphal on his *invention-trompete*. At that time, he had resolved to provide the horn with a similar improvement.<sup>94</sup>

The keyed-trumpet might have met the same short-lived fate as Kölbel's keyed-horn, but not for the virtuosic playing of Anton Weidinger—who inspired two composer-friends, both of the *Esterházy Court*, Franz Joseph Haydn (1732-1809) and Johann Nepomuk Hummel (1778-1837), to compose two cornerstone concerti of the trumpet-repertoire (Haydn's *Concerto per il Clarino in Eb major* (Hob.: VIIe/1), in 1796; and Hummel's *Concerto a Trombe Principale in E major* (S.49), in 1803)—in order to showcase Weidinger's virtuosity on his recently-mastered *invention-trompete*.

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<sup>93</sup> Dudgeon, p. 131.

<sup>94</sup> Dahlqvist, *The Keyed Trumpet and Its Greatest Virtuoso, Anton Weidinger*, 9.

Weidinger, who was born in Vienna, received advanced trumpet-training from 1783 via an apprenticeship with Peter Neuhold (1724-1801) the Viennese *Oberhoftrompeter* (chief court-trumpeter). In 1785, at the age of only nineteen, Anton received an outstanding *letter-of-release* from his mentor—a letter which highlighted Weidinger’s talent and diligent work-ethic—which allowed him to immediately take up a position as a field-trumpeter in the *cuirassier* regiment of the Polish Prince, Adam Jerzy Czartorisky (1770-1861). In 1787, Weidinger upgraded his military-assignment, by joining the dragoon regiment of the Archduke Joseph II, Holy Roman Emperor, a position he held until April 10, 1792.<sup>95</sup>

Although he would become a member of the *Imperial and Royal Trumpet Corps* by 1799, and eventually replace Neuhold, his mentor, as the *Oberhoftrompeter* of Vienna—Weidinger’s career-path represents a notable shift from the traditional military-oriented positions of his trumpet-playing predecessors. By resigning his post from the dragoon regiment—at the young age of twenty-five—and joining the Royal Imperial Theater shortly thereafter, Weidinger was consciously taking a full-fledged professional leap (and financial-risk) into the realm of art-music; a professional-leap not unlike Giovanni Punto’s (as a horn-soloist), several decades earlier.

It was this very shift that undoubtedly granted Weidinger the time and space to begin serious study of the keyed *invention-trompete* (as opposed to the natural-trumpet—and the fanfares and military-calls associated with the instrument and required of his previous military-oriented positions) that would lead Weidinger to commissioning both Haydn and Hummel to create repertoire for him. Also noteworthy is that despite being composed in 1796, there is no record of Weidinger ever performing Haydn’s virtuosic piece prior to March 28, 1800 when—by 1800, Weidinger had fully-arrived as a prominent figure in the Viennese music-scene (and had also spent *at least* four diligent-years fully mastering the *keyed-trumpet*)—Weidinger gave a

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<sup>95</sup> Dahlqvist, *The Keyed Trumpet and Its Greatest Virtuoso, Anton Weidinger*, 10.



“grand public concert, with a demonstration of his ‘organized trumpet,’ in the Imperial Royal National Court Theater”.<sup>96</sup> The grand concert included an aria-duo for soprano and trumpet by Franz Xaver Süssmayr (1766-1803); a sextet for two trumpets, clarinet, bassoon, trumpet and timpani by Ferdinand August Kauer (1751-1831); and what was likely the premier of Haydn’s concerto, (billed in the following manner) “Mr. Weidinger will play a concerto, composed by the master, Haydn, on the organized-trumpet of his own invention<sup>97</sup>”.



Figure 9: Portrait of Anton Weidinger



Figure 10: Keyed-trumpet in G with crooks for E and E-flat, Austrian model.<sup>98</sup>

By 1802, Weidinger had become so successful concertizing on his keyed-trumpet in-and-around Vienna, that he—like Punto before him—began a concert-tour throughout Europe and

<sup>96</sup> Dahlqvist, *The Keyed Trumpet and Its Greatest Virtuoso, Anton Weidinger*, 14.

<sup>97</sup> Although clearly not Weidinger’s “invention”, it was not uncommon for brass players of the time to either work directly with instrument-makers, and/or have the craftsmen skills themselves to make adjustments and alterations to their instruments. In this way, it was indeed Weidinger’s *organization* of the already existing *invention-trompete*.

<sup>98</sup> A modern copy of the kind of keyed-trumpet Weidinger might have played, photo by Alois Doke, Linz. This instrument was made by Rainer Egger in Basel (Switzerland) in 1998, National Music Museum 7332. “The Keyed Bugle,” Siouxland Public Media, Accessed February 20, 2018, <http://kwit.org/post/keyed-trumpet>.

England to demonstrate his technically-flowing virtuosity. Following one of the many successful concerts—this one in Leipzig in December, 1802—a critic of the *Allgemeine musikalische Zeitung* penned the following rave-review:

The *Imperial Royal Court Trumpeter*, Mr. Weidinger, of Vienna, gave us the opportunity of judging for ourselves his significant invention concerning the perfection of the trumpet (which has been touched upon, but not accurately enough, in these and other pages), and at the same time of admiring his masterful playing. It is completely founded in the fact that Mr. W. is fully conversant with all the half-tones lying within the compass of his instrument, and to such an extent that he plays running passages through them. Furthermore, the fear that we uttered (on the occasion of the first report concerning this invention), that this instrument might thereby have lost something of its pompous character, has been completely refuted by Weidinger's public demonstrations. The instrument still possesses its full, penetrating tone, a tone which is at the same time so gentle and delicate that not even a clarinet is capable of playing more mellowly. The proof of this is that Mr. W. performed a (very nicely written) trio for pianoforte, violin and trumpet,<sup>99</sup> by Hummel, in Vienna—as well as a concerto and several other concerted-pieces—absolutely perfectly, playing his solo passages just as sensitively as the other two instruments. His crescendi, his diminuendi, his clear high-register which penetrates to the very marrow (especially in those places where Mr. W. remained within the instrument's natural key) are truly incomparable and—in the literal sense of the word—unheard of. We cannot decide how much appertains to the new invention, and how much to the skilled virtuoso, since he is retaining closer knowledge of his instrument to himself for the moment. In any case, Mr. W. deserves high praise, and his instrument full attention.

Although the keyed-brass family would have a relatively short lifespan of less than a century of significant historical-impact, the instruments and the best players of them, including Weidinger's keyed-trumpet—who was so impressive, “playing his solo passages just as sensitively” as the violin and piano, and establishing truly “incomparable” and “unheard” of precedents for musically-sublime virtuosity in trumpet-playing, that it would encourage both instrument-makers and players to continue to evolve the possibilities for technical-flow on brass.

In the meantime, the keyed-trumpet, and the whole family of keyed-bugles that would shortly follow, including the bass member of the family, the *ophiecleide*—invented by Jean Hilaire Asté (1775-1840), in Paris, in 1817—served as *proof-of-concept* and demonstrated that the kind of technical-flow required of orchestral instruments in the classic-romantic era—

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<sup>99</sup> Unfortunately, a now lost trumpet trio by Hummel.

particularly in the hands of brass-virtuosi—could indeed be achieved on the entire range of brass instruments: Weidinger proved that aesthetically compelling solo and ensemble lines, could be carried on the soprano-timbred keyed-trumpet; similarly, Punto had already provided proof—via his hand-stopping technique—that the alto-timbred-horn could also carry beautiful and virtuosic solo and orchestral melodies required by the music of contemporary master-composers. The early Classical-era Vienesse composer, Georg Christoph Wagenseil (1715-77) with his *Concerto for Alto Trombone* (ca. 1763), demonstrated that, like the trumpet and the horn, the trombone—though somewhat neglected as a solo and orchestral instrument during the eighteenth-century (compared to its relative glory-years during the Renaissance)—was every bit as capable of carrying the same kind of virtuosic lines (in Wagenseil’s case, *alto*-lines) as the natural-horn and the keyed-trumpet.

Indeed, the entire trombone family of instruments—historically, the only continually-utilized, fully-chromatic brass-instrument (from its inception in the early fifteenth-century to the present)—began its resurgence by the late Classical-era and inspired leading composers (by the turn of the nineteenth-century) to compose lyrically-virtuosic orchestral passages in some of their most important compositions. For example, Mozart—who demonstrated in a number of his operas (particularly *Die Zauberflöte*, K. 620), and in his sacred music, (most notably his *Requiem in D minor*, K. 626 with its well-known *tenor*-trombone solo in the *Tuba Mirum* movement)—and Beethoven—in his *Symphonies No. 5*, Op. 67, and *No. 6*, Op. 68, and particularly with his *Symphony No. 9 in D minor*, Op. 125 (which features a *bass*-trombone solo leading the men’s choir in an important passage in the *finale*)—heralded that the trombone, as with the horn and the trumpet, were becoming fully-integrated into the Classical-era orchestral mainstream.

Louis-Hector Berlioz’s (1803-69), ground-breaking *Symphony Fantastique: Épisode de la vie d'un artiste ... en cinq parties*, Op. 14 (1830), with its fourth-movement *March to the Scaffold*, contains the first full “modern” complement of orchestral brass-instruments utilized in a significant orchestral piece. Berlioz’s brass section includes four horns (2 *cors in si b, grave*; 2

*cors in mi b*, i.e. two-low, and two-high natural horns), two trumpets (*1<sup>st</sup> et 2<sup>nd</sup> trompettes in si b*, i.e. natural-trumpets), two cornets (*trompettes a piston en mi b*, i.e. trumpets **with piston valves**), three trombones (*alto, tenor and bass trombone*) and an *ophicleide*<sup>100</sup>. With this full complement of brass, the young composer had established an orchestral brass section that could match the range and timbral spectrum—from soprano to contrabass, bright to dark—already more firmly-established in the woodwind and string sections of the symphonic orchestra.

Particularly important to this discussion is Berlioz’s use of a bass-voiced conical (and thus warmer than the bass-trombone) keyed bass-ophicleide, with important, exposed, and *virtuosic* technically-flowing lines throughout the final two movements of his *Fantastic Symphony*, including the famous soli statement of the *Dies irae* (a twelfth-century sequence associated with requiem masses), that Berlioz utilizes in the fifth-movement *Dream of the Night of the Sabbath*. Like the examples cited above, this served as a kind of *proof-of-concept*, i.e. that a bass brass-instrument, could match the virtuosity and technical-flow of its woodwind (e.g. bassoon/contrabassoon) and string (e.g. contrabass) counterparts. Interestingly, once the tuba had been invented less than a decade later, with its more focused timbre, and considerably greater capability for projection, Berlioz began requesting its use in the orchestras he was conducting, (sometimes in combination with an ophicleide).<sup>101</sup>

Similarly modernizing was Berlioz’s utilization of the *piston-trompettes*, or cornets—which had only just been invented in Prussia, and brought to Paris in 1826—in combination with the more traditional natural-trumpets (and natural horns). The French trumpeter, François Georges Auguste Dauverné (1799-1874), who first performed on the instrument to a Paris

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<sup>100</sup> Only one ophicleide is utilized in the 1830 version of the fourth movement.

<sup>101</sup> By the time he wrote his treatise on orchestration, in 1844, this had become quite concrete in his mind, “The bass tuba is nowadays very widespread in the north of Germany, especially in Berlin; it has an *immense advantage* over all other low wind instruments. Its timbre is incomparably nobler than that of ophicleides, bombardons and serpents, and has something of the vibration of the timbre of a trombone. It is less agile than the ophicleide, but its tone is powerful and its range in the lower part is *the most extensive available in the whole orchestra*.”

audience, in 1827, would continue to be an advocate for the new instruments. Dauverné not only successfully encouraged Berlioz to utilize the instrument in the composer's, *Waverly, Grande Overture*, Op. 1 (1827),<sup>102</sup> among other future works—but would also go on to be the first cornet/trumpet professor at the Paris Conservatoire, where he would count among his most successful students, the imminently influential Jean-Baptiste Arban.

Berlioz's impact on the modernization of orchestral trends in the nineteenth-century are immeasurable, including his highly influential treatise on orchestration *Grand traité d'instrumentation et d'orchestration modernes* (1844), which continues to influence composers' orchestration and scoring choices to this day. By the middle of the nineteenth-century, the modernizing forces catalysed by major composers such as Berlioz—and those who would follow his example, including among numerous others, Franz Liszt (1811-86) and Wilhelm Richard Wagner (1813-83)—would encourage numerous and rapid developments to brass-instrument technology, including rotary and piston valve-systems on all the brass instruments, thus availing much greater technical-facility to brass-playing artists. This would, in-turn, bring about by the early twentieth-century the dawning of a new golden-age of brass-playing artistry that hadn't been witnessed historically since Gabrieli's Venice in ca.1600. Nineteenth-century brass-pedagogues, particularly those associated with the Paris Conservatoire, published in relatively rapid succession, important new methodologies, to keep up with both the stream of mechanical advances, and the inherent importance of *technical-flow* pedagogy that resulted from the advancements in brass-instrument technology.

#### Dauprat, Dieppo and Arban on Technical-Flow

Through a brief overview of brass-playing technique suggested by mid nineteenth-century brass methodologies—published by leading professors associated with the Paris Conservatoire—

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<sup>102</sup> <http://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000045523>

one is able to get a sense of the seismic shifts occurring in brass-instrument development at the time; and also, in the most outstanding of them, a good overview of foundational advice that is still timely and relevant. With examples such as Arban's *Celebrated Method for the Cornet*, first published in 1859—but now, indeed *celebrated* and studied all over the world in numerous languages and editions—the methodology is so compelling that it has been utilized to this day—without interruption since it was first published—as a central treatise for the development of technical-flow, on all brass instruments. An early model for Arban was undoubtedly the voluminous horn-method, by Dauprat, *Methode de Cor Alto et Cor Basse*, published in 1824.

Louis-François Dauprat (1781-1868) entered the newly opened doors of the Paris Conservatoire, in 1795, as a teenager, where he was taught in the Bohemian horn-school championed by Punto (i.e. through Punto's student, Domnich). Dauprat would go on to advocate excellent natural-horn technique throughout his playing and teaching career, but was also sensitive to the rapid technological developments taking place with brass-instruments during his career. After graduating from the Conservatoire in 1798, Dauprat spent nearly a decade performing in military bands, before taking on major orchestral positions in France, including *Solo Horn* at the Grand Théâtre of Bordeaux (1806-08), and from 1808 the Paris Opéra, where from 1817-31 he took over as *Solo Horn*. Dauprat was also professor of horn at the *Conservatoire* from 1816-42, where upon his retirement, was succeeded by his student—another horn-virtuoso and master-pedagogue in his own right—Jacques-François Gallay (1795-1864).

Dauprat's three-volume, four-hundred page *Methode de Cor Alto et Cor Basse* represents one of the most comprehensive pieces of brass-literature ever written. In the words of the eminent horn-scholar Reginald Morley-Pegge (1890-1972), Dauprat's work represents “incomparably the greatest didactic-work ever published on the horn,”<sup>103</sup> indeed, arguably the most-comprehensive

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<sup>103</sup> As advertised for the first complete English translation, in a beautifully published single volume, has *remarkably* only been available since 1994. Accessed on February 20, 2018 [https://www.historicbrass.org/edocman/hbj-1992/HBSJ\\_1992\\_JL01\\_017\\_Ads.pdf](https://www.historicbrass.org/edocman/hbj-1992/HBSJ_1992_JL01_017_Ads.pdf)

methodology ever written for *any* brass instrument, by a single author. In addition to the hundreds of pages of exercises, etudes, excerpts and characteristic pieces, there is an extensive volume of prose-essays covering vast areas of horn and brass-pedagogy, as well as general musical knowledge. One of the fascinating characteristics of Dauprat's essays is the way he engages, philosophically, with topics central to nineteenth-century horn-players, including the explosion of outstanding horn repertoire being written by master composers, as well as his own anxious confrontation of the developing valve-technologies—a topic on which Dauprat speculates might indeed impact the future of horn-playing and technique:

From very early in the first volume, Dauprat addresses this issue:

from CHAPTER THREE – ON THE CHANGES AND IMPROVEMENTS  
THAT SOME WOULD LIKE TO SEE APPLIED TO THE HORN

Some have wished that by means of holes and keys the considerable series of factitious sounds on the horn might be eliminated, while at the same time and in the same way those that are totally lacking in the low register would become possible. But this method, already applied to the trumpet, has changed the timbre of the instrument to the point of giving it a quite peculiar character, creating an instrument that is neither a trumpet nor any other known instrument. This sort of “trumpet,” like the ophicleide (keyed serpent), which was borrowed from the English and perfected in France, may one day enrich instrumental music and increase the resources of composers; but these instruments could not replace those from which they originated.<sup>104</sup>

In short, Dauprat is not yet convinced of the viability of the keyed-bugle family of instruments—primarily because the sound, for him, is not as pure and direct as a natural-horn or natural-trumpet (i.e. the keyed instruments have a “peculiar character” and “could not replace those from which they originated”)—on the other hand, he has not completely dismissed the *possibility* of future improvements, i.e. that “may one day enrich instrumental music.”

With topics related directly to horn-pedagogy, Dauprat is much more sure-footed. For example, on horn-sound, and the way it intersects with articulation, Dauprat's ideas still ring true today (for both natural and valved-instruments). His discussion opens with the “three qualities to consider in producing sounds,” *pitch*, *intensity* and *timbre*. Below is the section where Dauprat

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<sup>104</sup> Dauprat, *Method for Cor Alto and Cor Basse* (1824), trans. Viola Roth (1994), 13.

discusses the second-quality, *intensity*, followed by some of his thoughts on sound-production vis-à-vis articulation. In the section immediately preceding the excerpt below (Chapter Eleven “On Breathing”), Dauprat introduces simple breathing-exercises derived from vocal pedagogy, and the importance of utilizing a full-breath in order to support the sound.

from CHAPTER TWELVE – ON THE MODIFICATIONS OF SOUND

There are three qualities to consider in producing sounds. . . [the second of which is] (2) The *intensity or strength*: the greater or less force or gentleness given to the sounds depends on the amount of energy with which the tongue is moved. The sustaining of the sound at the same degree of strength of gentleness depends upon the same volume of air being supplied as at the time of projection of this sound.

From, “the sustaining of the sound at the same degree. . .” Dauprat underscores how essential breath-support is for effective brass-playing, and continues this same discourse when discussing the interrelationship between breath-control and sound-production in the paragraph that follows:

The intensity or strength of the sound is thus limited only by the abilities of the individual player, or perhaps rather by the judgement that tells him how he must use his technique, according to the setting and style of the music. For the artist must make himself sufficiently master of all the sounds on his instrument to be able to alter them at will, to give them all possible brilliance and energy, or any desirable degree of gentleness and softness. . .

Thus, only by mastering the breath, and the intensity of the air-stream can one begin to control, i.e. *alter them at will* “all the sounds on one’s instrument,” and to give them “all possible brilliance and energy”. This significance of breath-control is a concept that would similarly inspire Arnold Jacob’s, and its central placement in his famous aphorism, “song and *wind*”.

In the following conclusion of *Chapter Twelve*, Dauprat illuminates the importance of uninterrupted air-flow for creating excellent sound production, and warns against the dangers of obstructive articulation, “what we do not accept is the actual pronunciation. . .” i.e. pronunciations that could create, physical barriers in the mouth-cavity for flow of air and sound. Dauprat does argue, however, that syllables such as “ta” and “da” can be helpful *conceptual* pedagogical-tools (including a shout-out to the influential Punto) for approaching articulation-pedagogy. At the very end of the chapter, one senses Dauprat’s frustration with the inherent limitations of written and spoken language, with, “it is well to use them in giving lessons in order



to avoid long discussions,” suggesting that imitation, during a studio-lesson, employing simplified conceptual tools (i.e. *ta* and *da*), is likely the most direct pedagogical-route.

. . . The attempt has been made to represent by various monosyllables the action of the tongue in the formation of sounds, and even the effect of different articulations.

Punto wanted the word “doan” pronounced strongly when attacking a sound, so as to make the instrument vibrate like a bell after it is struck by its clapper. . . We accept this simile. . . *[however] what we do not accept is the actual pronunciation of any word or syllable whatever*—a pronunciation impossible once the mouthpiece is sufficiently set against the lips to produce any sort of sound. One can easily satisfy oneself of this through experimentation.

The monosyllables “ta” and “da”, also from Punto, as well as those which one would like to use to represent tonguing, whether crisp or mellow, strong or weak, are to be thought of in the same way as his “doan” . . .

. . . As to the different ways of expressing articulations, it is well to use them in giving lessons in order to avoid long discussions. But we find describing them with monosyllables useless, each of which serves its own ends, and which are often impossible to render with any combination of letters at all.<sup>105</sup>

The key here, Dauprat seems to suggest, is don’t overthink, or in this case *over-syllabicate*. In other words, it is better to simply practice different options, and thus easily “satisfy oneself of this through experimentation”.

In Chapter Thirteen, *On Natural and Factitious Sounds*, Dauprat returns both to what was clearly a dilemma of his time, and a pressing issue on the author’s mind: the contemporary emergence of “hole and valve systems”, and for Dauprat, “their shortcomings”. In the second-half of the chapter, Dauprat gives guidance on hand-stopping technique which is enlightening both for its direct application for horn-players, and for its relevance for studying technical-flow, including on valve and slide-systems—which share similar harmonic-, and mechanical- breaks, associated with the physics of all brass instruments. The last sentence of the following excerpt is relevant not only for brass-players, but for anyone working to achieve seamless technical-flow on any instrument—with Dauprat arguing that any “capable artist can as easily conceal the imperfections of an instrument as draw on its great resources.”

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<sup>105</sup> Ibid, Chapter Twelve, 25-6.

from CHAPTER THIRTEEN – ON NATURAL AND FACTITIOUS SOUNDS

It is physically manifest that a wind instrument which naturally produces two widely separated sounds by the breath alone possesses within itself all the intermediate sounds which separate these two, and all that is required is a means of being able to lengthen or shorten the air column at will for an artist to have the possibility of playing all the sounds in the instrument's range in such fashion that there are no gaps between them . . . . The buccina or *tromba curva* of the ancients, the trumpet, the horn, and the trombone are also improvements on the *corne des bois* ("forest horn") in materials that give them greater sonority, such as silver, copper, gold brass, or yellow brass. But without holes and keys, and with only slides to tune the instrument to a given pitch, the horn and the trumpet possess only the natural sounds determined by their lengths. The method that has been found to produce the intervening sounds on the horn—by stopping the bell to greater or lesser extents with the hand—might appear insufficient, because not only does it alter the quality of the sounds, it is unable completely to fill in the gaps that exist among all the natural sounds. One would think, therefore, that these instruments are ready for new improvements for which the means have yet to be found, since, among the known resources, namely holes and keys, one will recall that we have already pointed out their shortcomings as applied to the horn and the trumpet (see CHAPTER THREE).

Be that as it may, the horn, with all its imperfections, is nonetheless the most beautiful of wind instruments in its timbre and the quality of its sounds, and the emotion which it awakens has a charm that, it is admitted, none can resist. *Finally the music and the playing of our Masters have sufficiently shown that a capable artist can as easily conceal the imperfections of an instrument as draw on its great resources.*

Evenness of sound, in all registers, on all brass instruments is one of the intrinsic challenges of brass-playing artistry. With hand-stopping, and the inherent timbral-changes, this challenge is exacerbated. Although modern brass instruments partially overcome this challenge through excellent valve and slide systems, the advice is still invaluable. Just as with hand-stopping, disrupting the flow of notes via valves and slides (even on the most modern efficient systems) similarly creates "factitious" sounds. In the following passage, Dauprat offers sage advice, advocating that only through patience, perseverance and above all, self-reflective critique may one achieve artistic-excellence, "with such good intonation as to leave nothing to be desired, constantly comparing them with each other, listening acutely to oneself, and judging oneself with severity". Also brilliant and timeless is Dauprat's persistent underscoring of mastering breath-flow for successful navigation through intervals, stopped-notes (and for modern-players, valve and slide breaks), i.e. that one should "establish the habit of strengthening the *factitious* notes through excellent breath-control ***without ever forcing them***":

Since the only way that was found for production the sounds which we call factitious was precisely that which must give them an unusual color in relation to the natural sounds, it was conceived that, by giving a larger volume of air to these sounds, and, on the contrary, conserving the air when playing the natural sounds, one could make them equal in volume and quality, at least as far as possible. But as Domnich has stated so well [in his methodology] this idea, while good for slow movements, would impede performance in fast movements. The help of the hand in the bell is therefore more effective, and more natural, than a calculated rationing of breath. In the same way, as Domnich has also said, the hand must not open the bell on the natural notes so much that they sound too bright, but enough that they are in tune. *This does not prevent one from seeking to establish the habit of strengthening the factitious notes with the breath without ever forcing them*, which would give them an unpleasant quality.

*It is necessary, indeed, to achieve evenness in quality between the sounds, and to play the intervals between them with such good intonation as to leave nothing to be desired, constantly comparing them with each other, listening acutely to oneself, and judging oneself with severity.* Moreover, the difficulty in achieving this evenness is not the same in each case, since the factitious sounds are not uniformly dulled, and in the middle range of the instrument their quality already comes close to that of the natural sounds. The accurate intonation of both types of sounds depends as much on the lips as the hand: if any sound is too low, a greater opening of the bell, as well as greater pressure of the lips, will bring it up; if it is too high, the opposite means are used, either both together or one at a time.<sup>106</sup>

The chapter also concludes with great advice on the importance of balancing embouchure control, with hand, (i.e. or valve and slide) manipulation, “if any sound is too low, a greater opening of the bell, as well as greater pressure of the lips”—in that there are always multiple ways on a brass instrument to achieve fine-tuned accuracy.

One of the most compelling aspects of Dauprat’s compendium is that in addition to the extensive information regarding technical development on the horn, he also professes an aesthetic stance in approaching the study of brass-instruments. This demonstrates the growing artistic-status—and the inherent self-awareness and confidence that comes with that status—of burgeoning nineteenth-century brass-masters, as well as the important artistic legacy they felt they were passing on to their students. Indeed to play with *technical-flow* and to manipulate rapid passagework with aesthetic-flair and accuracy, Dauprat’s advice towards the end of the second volume, to study it with “taste and grace” maybe the best advice a teacher could give to students seeking to achieve artistic excellence in developing one’s technical-flow.

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<sup>106</sup> Ibid, Chapter Thirteen, 27-9.

from CHAPTER FIFTEEN – ON TASTE AND GRACE

. . . Grace in music consists in particular of giving to melodies, passagework, ornaments, and embroideries, the dynamic, the articulation, and the expression that best suits each, according to the character of the music in which any of them occurs.

For example, the *coulé* [i.e. slur or legato] has more grace than the *pointé* [i.e. tenuto-marcato], and the *pointé* more than the *piqué* [i.e. staccato]. The crescendo from *piano* to *forte* has smoothness, but the decrescendo has some harshness, especially if it is made quickly. A dynamic that combines the two is the most graceful.

Finally, each character has its own kind of grace, which the player must be able to distinguish. But it is perhaps less difficult to choose the dynamics, articulations, ornaments, and contrasts suitable for this or that character, than to know how to combine them, and to do only what is required when it is required. Such is the mark of a rare talent combined with exquisite taste.

Taste, grace, and feeling are qualities that Nature grants to some and withholds from others. A man insensitive to the feelings that music expresses, if he is unfortunately fated to the practice of the art, will never be more than an orchestral-machine. But he who feels vividly moved upon hearing the masterpieces of our composers, both past and present, will certainly rise above his colleagues, or even rival the most famous among them.<sup>107</sup>

The humility, “who feels vividly moved upon hearing the masterpieces of our composers,” and the wisdom that unless one is sensitive “to the feelings that *music* expresses” one may be able to play with the accuracy required of an “orchestral machine,” but will never achieve the kind of artistic-musicality suggested by Dauprat’s “taste, grace and feeling,” and captured in the concept of technical-flow.

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The first *provisional* trombone-class was not established at the *Conservatoire* until 1833, and it was not until 1836 that the instrument was permanently-represented at the school, at which time Antoine Deippo (1808-78) was appointed the conservatory’s trombone professor.<sup>108</sup> At only twenty-five years old, Dieppo was just establishing himself as an outstanding ensemble and solo performer in 1830s Paris, first as lead trombone in innovative dance- and pop- orchestras around the city—led by the composer-conductor Philippe Musard (1792-1859) (who was an early innovator of the modern pops-promenade concert concept<sup>109</sup>). By 1838 Dieppo had also been

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<sup>107</sup> Ibid, Volume 2, Chapter Fifteen, 352-4.

<sup>108</sup> David M. Guion, *A History of the Trombone*, (Plymouth: Scarecrow Press, Inc., 2010), 55.

<sup>109</sup> Ibid, 178.

appointed the Principal Trombone of the recently established *Société des Concerts du Conservatoire*, a professional symphony orchestra associated with the conservatory, and for a time, one of the most outstanding orchestras in Europe.<sup>110</sup>

Dieppo's *Complete Method for the Slide or Valve Trombone* (1835), although not nearly as comprehensive as Dauprat's massive work, was, nevertheless—at one-hundred-sixty pages—one of the first large-scale trombone-methods ever published. Although Dieppo is relatively brief in the instructional-essay that opens his methodology, he does give us insight into some of the pedagogical-priorities that guided him towards becoming one of the most outstanding trombone performers, and pedagogues, of nineteenth-century France. The structure of his trombone method also likely served as a model for the similarly-organized cornet method that Arban would compose some twenty-years later, particularly in Dieppo's inclusion of chapters that Arban would later emulate: scale-exercises, intervallic studies, progressive studies, studies in ornamentation, a section on the *art of phrasing*, duets, and finally, three *operatic* fantasies (i.e. the kind of virtuosic embellished show-pieces that would evolve into the kind of theme-and-variations showcases that would become standard for brass-virtuosi by the middle of the century).

## GRACES, EMBELLISHMENTS OR ORNAMENTS OF MELODY.

### THE APPOGGIATURA.

# The Gruppetto or Turn

## The Passing Shake. The Shake.

Figure 11: Types of nineteenth-century embellishments from a brass-pedagogy perspective.<sup>111</sup>

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<sup>110</sup> Ibid, 167.

<sup>111</sup> Antoine Dieppo, *Complete Method for Slide or Valve Trombone*, (1836; repr., Victoria: qPress, 2016), 10-11..

The *graces, embellishments, and ornaments of melody*, that are essential elements of virtuosic technical-flow on all orchestral instruments, were being thoroughly examined in a number of nineteenth-century brass-methodologies (including the three examined here). Mastering these kind of studies were not only critical for understanding how to approach the solo brass-repertoire of the day, but also gave pedagogical-pathways of how one might improvise technically-flowing embellishments in any musical style on a brass instrument. The titles in Figure 11 (see above) are from the opening pages of Dieppo's method, where he first defines the kind of ornaments to be studied in his treatise, including the *appoggiatura*, the *gruppetto (or turn)*, the *passing shake* (i.e. a mordent), and *the shake* (i.e. a trill). As with the more well-known Arban ornamentation-studies, Dieppo offers examples of how best to study all of the above ornamentation—though with only eight-pages of exercises (compared to the thirty-plus pages included in Arban's method)—Dieppo offers more of an overview vis-à-vis Arban's more in-depth studies.

Whereas Dauprat's method opens with nearly forty-pages of erudite text, divided into sixteen chapters (all before even the *first* exercises in "Lesson One"), Dieppo's only includes fifteen-pages of general music information—the kind of introduction one might associate with beginner *band-tutor* literature that became common in the twentieth-century—followed by a scant (compared to Dauprat!) two pages of text in a section entitled "Dieppo's Method for the Slide and Valve Trombone".

Clearly in his method, Dieppo is targeting a different, indeed broader audience, than Dauprat. With Dauprat's we can sense that he is writing for conservatory-minded students (and brass-playing professionals) who have already fully-committed themselves (or are aspiring) to a professional-musician's life. Given that the trombone had only been fully-embraced by the *Conservatoire* community some two-years prior to Dieppo's publication, his target-audience was likely directed both towards serious conservatory-bound students, as well as a broader public of brass-players—from amateurs, to military-band musicians, to orchestral players, and everything

in-between. This is not surprising given the contrasting pedagogical-paths Dauprat and Dieppo would have taken in their respective careers—and, significantly, is reflective of the ever-expanding body of brass-players (trombone being the most recent) being brought into the nineteenth-century Classic-Romantic era mainstream.

Below is the entire opening, “Dieppo’s Method” of the *Complete Method for the Slide and Valve Trombone*, with some reflections interjected:

### **Dieppo’s Method for the Slide and Valve Trombone<sup>112</sup>**

#### **Movements of the Slide.**

To attain perfect precision of the shifts great suppleness of the forearm is required and no stiffness of the wrist. The shoulder and upper part of the arm to remain immobile without being stiff.

The slide is to be pushed or drawn with firmness and stopped at the note required without hesitation.

Dieppo’s advice for relaxation, right from the outset, i.e. “suppleness of the forearm,” “immobile without being stiff,”; as well as his succinct, yet excellent advice about slide-technique, that it should be “drawn with firmness,” and stopped “without hesitation” is insightful (and modern) in its pedagogical-approach.

#### **Tongue and Slide.**

The action of the tongue and shifts must be combined so that the shift is ready when the tongue lets the wind loose. A patient and slow practice of the scales will soon give liberty and freeness of action.

Dieppo is less clear here, regarding articulation, but the “patient and slow practice of the scales” is significant, in that the inclusion of *any* extended scale-exercises, in a brass methodology, was still a novel-concept at the time; a point that Arban would underscore in his own method. With Dauprat, Dieppo, and Arban, one senses that they were acutely aware of how far behind the brass-pedagogy discipline was vis-à-vis the more established string- and keyboard- methodology tradition.

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<sup>112</sup> Antoine Dieppo, *Complete Method for Slide or Valve Trombone*, 14-16.

#### Position of the Valved Trombone.

The instrument must be held with the left hand, around the valves. By placing the hand thus, the mouthpiece will be kept steadily on the lips.

The position of the thumb depends on the model of the instrument; but in any case it must be placed on lower than the forefingers; for the purpose of giving a natural position to the arm. The right hand is employed to press down the valves (also called pistons), which must be touched with the tips of the fingers; otherwise, they will not work freely. The forefinger is called the first finger; the second, is the middle-finger; and the third is the one next to the little-finger.

The first finger presses down the first valve, which is nearest the mouthpiece. The second finger is placed on the middle, or second valve; and the third finger on the third valve; which is nearest the bell. The thumb must be round the first valve, but without grasping it too much; because the fingers must act freely; and if the thumb is placed too tightly round the valve; it makes the fingers stiff.

The position of the thumb is under the main tube or pipe which begins at the mouthpiece and goes through the valves.

Dieppo was primarily a slide-trombonist, but part of his duties at the *Conservatoire* was teaching the recently invented valve-trombone to military-band musicians—who were utilizing the “modern” instruments, in part, due to the perceived greater convenience for marching.

#### Tongue and valves.

The action of the tongue and valves must be combined, as in the case of tongue and slide.

#### Explanation of Signs for Valved Trombone.

0 – Open notes, 1 – first finger, 2 – second finger, 3 – third finger, 1/2– first and second fingers together, 1/3 – first and third fingers together, 2/3– second and third fingers together, 1/2/3 – first, second and third fingers together.

Dieppo also includes a full-page diagram (which appears just before this “Dieppo’s Method” section) of a slide-trombone with slide-positions. . .

#### Production of Sound.

On the trombone as in all wind instruments the sound is produced by the vibration of the column of air contained in the tubing.

The lips and tongue modify its intonation.

Two principal objects must be attained, purity of tone, and correctness of intonation.

Like Dauprat, Dieppo is suggesting here that there are—in addition to the slide—multiple ways of adjusting sound and pitch, including with the lips, and with the tongue (perhaps suggesting that one can manipulate the timbre/pitch via adjustments in the oral-cavity).



### Purity of Tone.

It depends greatly on the good position of the lips on the mouthpiece and upon throwing the wind by giving due attention to the quantity required accordingly if the style of music be *forte* or *piano*.

The mouthpiece is to be placed in the centre of the mouth resting a little more on the upper lip, breathing from the corners of the mouth, and not through the mouthpiece.

To obtain the high notes press the mouthpiece against the lips, which contract themselves to allow less wind to pass than for the low notes which require more parting of the lips and less pressure.

Here again, Dieppo's advice is a bit of mixed-bag. On one-hand, Dieppo soundly suggests developing one's embouchure, i.e. "the good position of the lips on the mouthpiece," and "giving due attention" in the manipulation of the breath and the air-stream; however his advisement that to "obtain the high notes, press the mouthpiece against the lips," can obviously induce tension, particularly if he is suggesting (which he seems to be) that one should force greater mouthpiece pressure to "contract" the lips. Of course, adjusting the aperture via firm corners, and increasing the air-speed, is a more apt, less tension-inducing solution for approaching the upper-register—opposed to the antiquated "pressing-method" that Dieppo seems to suggest.

### Correct Intonation.

Almost every instrument can produce all the chromatic sounds of the scale by means of keys or valves, while in the slide trombone, the different chromatic intervals being produced by the alteration in the length of the slide, the sound, or intonation of the note must be in the mind of the player before he emits it.

As every experience brass-pedagogue, knows (and, remarkably, Dieppo is only twenty-seven when his composing his *Methode*, so was likely in his own stage of rapid development as a pedagogue), a central key to all excellent brass-playing is the ability to pre-hear—analog to its importance in vocal-pedagogy—before one plays, i.e. that the "note must be in the mind of the player before he emits it."

### Emission of Sound and Tonguing.

To produce the note, the tongue will press against the opening of the lips and swiftly retire, giving passage to the wind into the mouthpiece, taking care not to let it escape through the corners of the mouth; the tongue is to repeat this action for every detached note. When a long note, the wind must be kept back and smoothly emitted until the expiration of the value of the note.

In blowing do not puff your cheeks out, and avoid the repercussion of the throat after the emission of sound, thus: *tu . . . ugg!* but keep the wind, even immediately after the syllable "*tu*" is produced.

Dieppo's focus here is on keeping the oral-cavity open, i.e. that even when the player is performing an articulated "detached note," one should give "passage to the wind into the mouthpiece," and that on long notes, the air should be unobstructed, and "smoothly emitted." His focus on keeping an open-throat is also excellent, i.e. that one should avoid the closing of the throat after articulating, hence "tu" *not* "tu . . . ugg!".

The pupil will be wise to study each lesson and the exercises following, before attempting to play all the notes which are in the preceding tableaux, which is only a general guide for quick reference. By doing thus, he will arrive at a real knowledge of his instrument; otherwise he will never be able to occupy a position as a trombone player in an orchestra or band, but like a beginner, who wishes to play before knowing all the necessary terms and uses of the principles of music, he will remain—an amateur.

Despite his youth, and the brevity of the opening-remarks contained in his method, Dieppo clearly had the kind of self-discipline and intuitive-wisdom essential for excellent teaching. His closing remarks advocates the kind of mindfulness that Dieppo undoubtedly already embodied—one who had "studied each lesson and exercise" with the kind of artistic aspiration that had allowed him to "arrive at a *real* knowledge of his instrument". Dieppo's musical-artistry and pedagogy were obviously being fully embraced by the Parisian musical community, as his playing and pedagogical career attest—the kind of success he surely wanted to pass on to his students.

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Joseph Jean-Baptiste Laurent Arban (1825-89) came of age just as the modern-era of brass instruments was in full swing. Studying with the aforementioned François Daeverné from 1841-45—who was instrumental in introducing the potentiality of valved-instruments to Berlioz several decades earlier—Arban became not only a conductor, composer, and brass pedagogue, but was a lifelong champion of the conically-agile cousin of the trumpet, the cornet. Although the instrument initially received the kind of resistance intimated by early critics, such as Dauprat—in

part because of its perceived-threat of replacing the natural-trumpet—by the end of the century it was fully-embraced as an important solo brass-instrument (and Arban as its most important artist) as well as in orchestral-contexts as a complementing-timbre alongside the trumpet.

Arban began teaching as the professor of saxhorn (valved-brass instruments) at the *École Militaire* in 1857, and from 1869 was appointed as the professor of cornet at the *Conservatoire*. Notably, like the trombone which had joined the conservatory only a generation earlier, the cornet was a newly created professorship (and field of study), and was taught at the conservatory in parallel with the trumpet, as a separate (but, obviously related) discipline—until the trumpet and cornet classes were finally merged into one, from 1948.<sup>113</sup>

Inspired by the great violinist Niccolò Paganini (1782-1840), Arban sought to emulate the virtuosic-style common in string and piano playing in the nineteenth-century romanticism, and sought to showcase its possibilities via the technical-flow now possible with modern valved-instruments. Given the smaller, conical—and thus more agile nature of the instrument compared to the broader-sounding trumpet—the cornet was the ideal vehicle for achieving Arban's end.

Arban's *Grande méthode complète pour cornet à pistons et de saxhorn*, first written in 1859, and based on the precedents established by Dauprat and Dieppo, is arguably the most effective of the three. Its combination of highly-useful pedagogical insight, with a wealth and variety of exercises, create a balanced pragmatism that makes it approachable by students and professionals alike. By the late nineteenth-century Arban's *Grande méthode* was being translated into multiple languages—including the 1893 American edition, *Arban's Complete Celebrated Method for the Cornet*—and was being utilized by brass players and pedagogues throughout the world, as one of the central-treatises for the study of brass technique and technical-flow on brass instruments.

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<sup>113</sup> Edward Tarr, *The Trumpet*, (Portland: Amadeus Press, 1988) 168-9.

Despite arguing that it seemed strange, in Arban's mind, to have to defend the still relatively new cornet, he opens his preface doing just that, providing a kind of rebuttal to Dauprat's generation of key-and-valve critics. Arban buttresses his argument by aligning recent brass-developments with the older, more established technological-advances already more firmly established on the "flute, clarinet, and even the violin". Also, Arban convincingly reasons for progress, more generally, suggesting that "time-honored" nay-sayers will always resist change, even faced with "new and striking proof" of clear technical and musical advantages:

from PREFACE

It may appear somewhat strange to undertake the defense of the cornet at a time when this instrument has given proofs of its excellence, both in the orchestra and in solo performances, where it is no less indispensable to the composer, and not less like by the public that the flute, the clarinet, and even the violin; where, in short, it has definitely won for itself the beauty of its tone, the perfection of its mechanism, and the immensity of its resources, so justly entitle it.

But this was not always the case; the cornet was far less successful when it first appeared; and, indeed, not many years ago, the masses treated the instrument with supreme indifference, while that time-honored antagonist—routine—contested its qualities, and strove hard to prohibit their application. This phenomenon, however, is of never-failing recurrence at the birth of every new invention, however excellent it may be, and of the fact the appearance of the sax-horn, instruments of still more recent date than the cornet, gave a new and striking proof.<sup>114</sup>

Although Arban doesn't include the kind of extended essays from the opening of his method (as Dauprat did), he does provide (more similarly to Dieppo), nearly twenty-pages of introductory material—including a number of brief but insightful general remarks on developing one's technique as a brass-musician. Also, Arban provides guiding commentary interspersed throughout the volume when introducing new exercises and sections (a feature lacking in Dieppo's method), a model that would be followed by numerous other brass methodologies that have been written since.

Arban interestingly opens the discussion of sound and sound-production with articulation, and *not* legato playing (as many modern brass-pedagogues prefer). Nevertheless, Arban does stress the importance of approaching articulation and sound production with an open

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<sup>114</sup> Arban, *Complete Celebrated Method*, iii.

mouth-cavity (i.e. the tongue performs a “retrograde movement”), once a note has been articulated—thus allowing the “column of air” to “precipitate violently into the mouthpiece,” creating the sound. Particularly with cornet and trumpet, the high-velocity air does indeed move quickly through the mouth to the embouchure, albeit “violently” is certainly not the ideal descriptor here.

from Method of Striking or Commencing the Tone :

It should never be lost sight of, that the expression *coup de langue* (stroke of the tongue) is merely a conventional expression; the tongue does not strike; on the contrary, it performs a retrograde movement; it simply supplies the place of a valve.

This circumstance should be well borne in mind before placing the mouthpiece on the lips. The tongue ought to be placed against the teeth of the upper jaw in such a way that the mouth should be hermetically sealed. As the tongue recedes, the column of air, which was pressing against it is precipitated violently into the mouthpiece and causes the sound.

Like both Dauprat and Dieppo, Arban suggests “tu” as a universal syllable for initiating an articulation on a brass-instrument. Arban’s discussion of *marcato*, *staccato*, and *legato*, articulations provides excellent advice, particularly in his insistence of always finishing with the openness implied with the “u” part of the “tu” syllabification, i.e. “so that the sounds, although detached, still form a connected phrase,” and similarly in running-passages that, after the initial articulation, one should substitute “du,” because it serves “admirably to join notes together.”

The pronunciation of the syllable “tu” serves to determine the striking of the sound. This syllable may be pronounced with more or less softness, according to the degree of force to be imparted to the note. When a vertical dash is placed over a note it indicates that the sound ought to be very short; the syllable ought then to be uttered very briefly and dryly. When, on the contrary, there is only a dot the syllable should be pronounced with more softness, so that the sounds, although detached, still form a connected phrase. When, upon a succession of notes, there are dots over which there is a slur, the performer should invariably strike the note with a very soft “tu,” and then substitute for it the syllable “du,” because the latter syllable not only distinctly articulates each note, by also serves admirably to join notes together.

These are the only three methods of commencing, or, as it is called, “striking,” the sound. Further on, I will duly explain the various articulations. For the present, it is only necessary to know and to practice the simple tonguing, for upon this starting point the pupil’s future depends entirely.<sup>115</sup>

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<sup>115</sup> Ibid, 4.

Similar to the gravity which both Dauprat, and Dieppo took to disciplined-study, Arban's underscoring that "the pupil's future depends entirely," upon excellent sound-production and articulation demonstrates how essential Arban felt this lesson was for developing excellent technical-flow.

Arban quickly returns to sound-production and articulation several pages later, in his section titled, "*STYLE: Faults to be avoided*," again stressing that unless one masters excellent tone-production, one "will never become a great artist". For Arban, one of the keys to assuring good tone production is avoiding the collapse of the oral cavity, i.e. one which produces a "doua" type of articulation, which, as Arban suggests, is the habit of many beginning brass-players (even to this day).

from STYLE: Faults to be avoided:

The first matter which calls for the student's special attention is the proper production of the tone. This is the basis of all good execution, and a musician whose method of emission is faulty will never become a great artist.

In the *piano* as well as the *forte* the "striking" or commencing of the sound ought to be free, clear, and immediate. In striking the tone it is always necessary to articulate the syllable "tu," and not "doua," as is the habit of many players. This last mentioned articulation causes the tone to be flat, and imparts to it a thick and disagreeable quality.

The following passage is fascinating in Arban's tone, suggesting that by *style* he does not mean some idealized high-art (i.e. "I am not alluding to the supreme quality"), but rather that simply a disciplined, careful, self-aware approach (echoing both Dauprat and Dieppo)—that follows the composers' intentions and thus is *natural*, *correct*, and that one executes "music as it is written—to phrase according to the style and sentiment of the piece performed." Indeed this is the goal of technical-flow, that one achieves accurate manipulation of one's instrument, so that it is a means to the ultimate end of illuminating the culminating aspects of art.

After acquiring the proper methods of tone-production, the player must strive to attain a good style. With this I am not alluding to that supreme quality which represents the culminating point of art, and which is rarely found even among the most skilful and renowned artists, but to a less brilliant quality, the absence of which would check all progress and annihilate all perfection. To be natural, to be correct, to execute music as it is written, to phrase according to the style and sentiment of the piece performed—these are qualities which surely ought to be the object of the pupil's constant endeavours, but he cannot hope to attain them until he has rigorously imposed upon

himself the strict observance of the value of each note. The neglect of this desideratum is so common a defect, especially among military bandsmen, that I think it necessary to set forth the evils arising therefrom, and to indicate at the same time the means of avoiding them. . .

Through the suggestion of a pedagogical metaphor—that the tongue is like the bow on a violin—Arban’s utilization of a *conceptual* pedagogical-tool for a technical solution, i.e. in order to improve one’s *style* and technique is modernist in its metaphorical (and hence, psychological) approach.

. . . From these few remarks alone the reader may readily perceive how much the general execution or style of a player will be influenced by faulty articulation. It must also be borne in mind that the tongue stands in nearly the same relation to brass instruments as the bow to the violin; if you articulate in an unequal manner, you transmit to the notes emitted into the instrument, syllables pronounced in an uneven and irregular manner, together with all the faults of the rhythm resulting therefrom.<sup>116</sup>

As mentioned, some of Arban’s most helpful pedagogical material appears in the body of his method, as introductions to sections of exercises. Below are several examples. Although Arban doesn’t open his methodology with the study of legato playing, he does nevertheless underscore its extreme importance to the art of brass playing, one which he explicates by devoting “considerable space to its exposition.”

As with Dauprat’s hand-stopping technique section, Arban suggests creating fluidity in all aspects of technique, including legato playing with or without valves—even adding extra difficulty (i.e. “over-training,” in modern terminology) via alternate-fingerings in his exercise to further elucidate this essential aspect of technical development, “in order to invest this kind of exercise with unusual difficulties through which the lips are compelled to move and produce the notes without the aid of valves.”

from EXPLANATION for the Studies on the Slur

Without question this is one of the most important portions of my method and I have devoted considerable space to its exposition. Particular attention has been given to those exercises which are produced by the movements of the lips alone, without the aid, or substitution of a valve. The fingering must be used exactly as indicated, not matter how unusual it may appear. I have purposely indicated the fingering as I did,

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<sup>116</sup> Ibid, 6-7.

not because I wished to recommend its habitual usage, but in order to invest this kind of exercise with unusual difficulties through which the lips are compelled to move and produce the notes without the aid of valves. This exercise, moreover, is analogous to that practiced by singers when they study the movement of the glottis in order to master the trill.<sup>117</sup>

As with lyrical-flow, technical-flow throughout the nineteenth-century continued to align itself with the vocal-pedagogy tradition, i.e. that the mastery of the trill is “is analogous to that practiced by singers.”

As mentioned with the discussion of Dieppo’s method, extensive scale-study for brass-players—at least in written etude form—was only just emerging in the brass-methodologies of the nineteenth-century (undoubtedly because of the key and valve systems that made them more readily applicable, and feasible). Arban stresses the critical importance of scale-study, i.e. “at length, and in every variety of key” for the development of advanced technique on brass instruments, an area which has been “greatly neglected,” in past brass methodologies. Notably, Arban accentuates the importance of sound-production (“perfect equality of sound”), as well as that a flowing-legato approach is indeed the “legato and *correct*” methodology.

from STUDIES on the Scales: Major Scales

The study of the scales has, as a rule, been greatly neglected in works of the present description; writers on the subject generally content themselves with giving a few examples, leaving the pupil to supply for himself whatever may be wanting in the method. What is the result? Why, that few students are capable executing a scale correctly. It is, however, of urgent importance, that the scale should be diligently practiced. Therefore, knowing as I do, the importance of this branch of study, I have treated it at length, and in every variety of key. By this means a perfect equality of sound, as well as a legato and correct method of playing, may be obtained.<sup>118</sup>

Multiple-tonguing is key to developing the technique required for the kind of virtuosic solo-playing Arban favoured—and the type of brass-virtuosity that would be brought into orchestral brass-playing by the end of the century. For this reason, Arban includes extensive studies for both duple and triple applications. In both cases, Arban highlights the importance of maintaining a legato approach, “neither too short or too long,” and “to prolong each syllable (i.e.

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<sup>117</sup> Ibid, 37.

<sup>118</sup> Ibid, 58.



the “u” part) a little,”—and that as with all development of technical-flow, it is best to embark with a simple and patient approach, i.e. that the simpler “earlier studies. . . should be very slowly practiced.”

from DESCRIPTIVE ADVICE on Tonguing: Triple Tonguing

The staccato consists in detaching a succession of notes with regularity, without allowing the tonguing to be either too short, or too long. In order to arrive at this degree of perfection the earlier studies, which serve as the basis, should be very slowly practiced.

The student should first strive to pronounce, with perfect equality, the syllables, “tu, tu, ku”. In order to impart more equality to the tonguing, it is necessary, when beginning, to prolong each syllable a little. When great precision has been obtained in the utterance of the tonguing, it should then be more briefly emitted, in order to obtain the true staccato.<sup>119</sup>

Arban concludes his method with a set of virtuosic theme-and-variation concert pieces, *Twelve Celebrated Fantasies and Air Variés*, that represent for Arban a culmination of the pedagogy of technical-flow that a student should aim to achieve through the study of his method—an “embodiment of the various instructions contained in this volume; they will be found to contain all the articulations, all the difficulties, of which I have in turn already given the solution.” These pieces were not only favorite concert-pieces of Arban (and his audiences)—most notably the *Fantasie and Variations on The Carnival of Venice*—they would also serve as compositional models for the virtuosic golden-age of brass playing exemplified in the early twentieth-century by John Philip Sousa, and his brass-playing stars, Herbert L. Clarke, and Arthur Pryor.

In his discussion of these virtuosic pieces, Arban gives valuable and aesthetically sound advice about how to maintain both endurance throughout these kind of potentially-taxing showpieces—as well as how to achieve them with artistic integrity—i.e. by varying colors, timbres and musical contrasts, i.e. “by widening the lips, and veiled tones by contracting them,” which creates unique timbres, decreases fatigue, and importantly introduces “effective contrasts into the execution” thus allowing for artistically-satisfying performances.

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<sup>119</sup> Ibid, 153.

from LAST PART

Careful study and experience will teach him to triumph over such difficulties and will provide him with resources which, in turn, will enable him to master this particular phase of playing without difficulty. As a means to this end, I will point out the cantabile passages in particular, which should be played with the utmost expression, at the same time modifying the tone as much as possible. On the cornet, as with the voice, clear tones may be obtained by widening the lips, and veiled tones by contracting them. This circumstance affords the performer an opportunity to rest, while still continuing to play, and at the same time enables him to introduce effective contrasts into the execution. I repeat, that by little artifices of this kind, and by skilfully husbanding his resources, the player will reach the end of the longest and most fatiguing morceau, not only without difficulty, but even with a reserve of strength and power, which when brought to bear on the final measures of a performance, never fails to produce its effect on an audience.

The twelve grand morceaux<sup>120</sup> which follow are the embodiment of the various instructions contained in this volume; they will be found to contain all the articulations, all the difficulties, of which I have in turn already given the solution. They will also be found to contain melodies calculated to develop the taste of the student, and to render it as complete and as perfect as possible.<sup>121</sup>

Arban concludes his final prose remarks of the “Last Part,” with the kind of language reminiscent of Dauprat’s commentary on taste and grace; and similarly, Arban is reaching for the inspirational grand-gesture. Perhaps, most remarkably, is how far, and how fast the nineteenth-century brass-tradition had developed under the auspices of performers and pedagogues (and instrument-makers), such as Dauprat, Dieppo, and Arban—and how self-aware the brass-playing community was becoming of its own unexplored potential—a potential that would continue to blossom throughout the twentieth-century and beyond. The kind of encouragement, and advocacy for continued evolution, contained in Arban’s suggestion that we, as brass-artists and pedagogues, should “seek out, amongst singers, and instrumentalists, the most illustrious models,” is sage counsel—for it is only through the relentless pursuit of artistic and pedagogical excellence that brass-players will be “worthy of being, in their turn, cited and imitated in the future!”

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<sup>120</sup> A morceaux is a brief musical composition. In Arban’s *Celebrated Method*’s case, the twelve-pieces all written in the form of theme and variations, most famous being *No. 12 – Fantasia and Variations on The Carnival of Venice*

<sup>121</sup> Arban, *Complete Celebrated Method*, 284.

At this point my task as a professor (employing as I now do the written instead of the spoken word) will end. There are things which appear clear enough when uttered *viva voce* but which cannot be committed to paper, without engendering confusion and obscurity, or without appearing puerile.

There are other things so elevated and subtle a nature, that neither speech nor writing can clearly explain them. They are felt, they are conceived, but they are not to be explained, and yet these things constitute the elevated style, the grand *ecole* [school or method], which it is my ambition to institute for the cornet, even as they already exist for singing and the various kinds of instruments.

Those of my readers who are ambitious and who want to arrive at this exalted pitch of perfection, should, above all things, endeavour to hear good music well interpreted. They must seek out, amongst singers and instrumentalists, the most illustrious models, and this practice having purified their taste, developed their sentiments, and brought them as near as possible to the beautiful, may perhaps reveal to them the innate spark which may someday be destined to illumine their talent, and to render them worthy of being, in their turn, cited and imitated in the future.

### **A Selection of Breathing-Flow Applications** **Excerpted from Brass Literature through the Ages**

***From Johann Ernst Altenburg's Essay on Introduction to the Heroic and Musical***

***Trumpeters' and Kettledrummers' Art (1795):***

#### **The Sound of This Instrument in General**

The sound of the trumpet properly originates thus: two moving bodies collide with one another; that is, one stream of air is driven against another; or, more specifically, the air blown in through the mouthpiece circulates until the air within the entire metal tube is set into vibration thereby. This vibration is imparted by the air in the tube to the outside air, or pushes against it. Now the stronger air is set in motion and the more pronounced the vibrations, the louder the sound. Thus the trumpet does no more than determine the loudness of the sound in general. This same manner of sound production also takes place with the human voice, the organ, and all wind instrument, which are commonly called *pneumatica*.<sup>122</sup>

#### **Formation of the Sound**

In the low register we have series of seven euphonious sounds which can be blown on the trumpet without any great skill. Others lying between them are not easily produced, even though Nature placed these seven sounds there not in steps, but in leaps. The reason for this difficulty is that the very weak thrust of air required to sound the low tones can produce only the most perfect shaking (vibrations) of the air column, for which reason it is not possible for the player to blow the several intermediate and more difficult sounds. Depending on whether the afore-mentioned thrust of breath occurs through a larger or a smaller opening of the mouth, a slower or a faster movement of the air will arise from this, resulting in a lower or higher pitch. For the very reason that the high pitches make more vibrations, they sound louder and more penetrating to one's natural sense of hearing than the low ones. The higher we go, the

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<sup>122</sup> Altenburg, *Trumpeter' and Kettledrummers' Art (1795)*, tran. Tarr, 69.

more tones we also find which are somewhat more difficult and troublesome to produce. One can examine here what I have said about the formation of the sound. I see myself obliged to explain this somewhat more clearly.<sup>123</sup>

Some Suggestions as How a Teacher Might Appropriately Instruct his Pupil

I shall endeavour to set these suggestions forth in nine lessons, without, however, commending my method as the only good or best possible one.

First Lesson

The teacher should explain to him that the required embouchure is produced by a certain position of the tongue and a tight closing together of the teeth and lips, so that only a small opening is left between them through which, with the help of the tongue, the air is driven into the mouthpiece and further, into the trumpet.

However, the lips and cheeks may not be puffed out thereby, because through this puffing only a hollow, weak thrust of air would be produced, with which one would not be able to control the different tones; and besides, it would be against good manners.<sup>124</sup>

***From Louis-François Dauprat's Method for Cor Alto and Cor Basse (1824):***

CHAPTER ELEVEN: On Breathing

Since the action of breathing is the same for the players of wind instruments as for singers, we can think of nothing better than to cite a portion of the Bernardo Mengozzi, *Méthode de chant du Conservatoire de Musique*, which applies to the subject:

“Breathing is the action of the lungs in taking in and expelling the air. This action is divided into two alternating movements: inhalation and exhalation.

“With inhalation, the lungs dilate to bring air from outside into the chest; with exhalation, they subside to expel it again.

“Notice that the breathing action for singing differs in some ways from that used in speaking.

“When one breathes in order to speak, or simply to renew the air in the lungs the first motion is inhalation. The abdomen extends and the upper part comes forward a bit. Afterwards it flattens again, producing the second motion, that of exhalation.

“These two motions operate slowly when the body is in its natural state.

“On the other hand, in breathing for singing, when inhaling it is necessary to flatten the abdomen and raise it quickly, expanding and extending the chest.

“While exhaling, the abdomen must return very slowly to its natural condition, and the chest must fall at the same rate, so as to conserve and manage the air in the lungs as long as possible.”

In a note attached to this chapter, it is recommended to students that they occupy themselves particularly with proper breathing, which is essential for singing. They are encouraged to practice each day taking and holding air as long as possible, in conformation with the given principles.

The *Méthode de chant* goes on to state that “without a large volume of air, which one must know how to restrain and manage at length and with skill, there will be

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<sup>123</sup> Ibid.

<sup>124</sup> Ibid, 116.

neither strength nor timbre in the voice. In addition, without such ability, it is hardly possible to phrase melodies well.”

This advice applies equally to the playing of wind instruments, and the differences that arise from the position of the embouchure do not alter anything in the manner of breathing.

We will here indicate those differences: 1) In the initial motion, that of inhaling, the lips part, the tongue retracts, and the air comes into the lungs; 2) the greater or lesser amount of air having been inhaled, the lips reset, and the tongue advances to close the opening that remains in the middle of the mouth, and to retain the inhaled air. This is the second motion. 3) The tongue retracts again quickly, and the inhaled air escapes and strikes the air enclosed in the instrument. It is this collision or shock to the air that produces the sound.<sup>125</sup>

***From Antoine Dieppo’s Complete Method for Slide or Valve Trombone. (1836):***

Breathing.

The action of breathing taking a certain amount of time, it is very important to breathe at certain rests, or phrases with great attention, in order not to interrupt the style of the melody.

Do not exhaust your wind; hold it so you can augment or diminish the power at command.<sup>126</sup>

***From Jean-Baptiste Arban’s Complete Celebrated Method for Cornet. (ca. 1859):***

Method of Breathing.

The mouthpiece having been placed on the lips, the mouth should partly open at the sides, and the tongue retire, in order to allow the air to penetrate into the lungs. The stomach ought not to swell, but, on the contrary, rather recede, in proportion as the chest is dilated by the respiration.

The tongue should then advance against the teeth of the upper jaw in such a way as to hermetically close the mouth, as though it were a valve intended to keep the column of air in the lungs.

The instant the tongue recedes, the air which has been pressing against it precipitates itself into the instrument and determines the vibrations which produces the sound. The stomach should then gradually resume its primitive position in proportion as the chest is lightened by the diminution of the air in the lungs.

The breathing ought to be regulated by the length of the passage to be executed. In short phrases, if the breath is taken too strongly, or repeated too often, it produces a suffocation cause by the weight of the column of air pressing too heavily on the lungs. Therefore, as early as possible, the student should learn to manage his respiration so skilfully as to reach the end of a long phrase without depriving a single note of its full power and firmness.<sup>127</sup>

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<sup>125</sup> Dauprat, *Method for Cor Alto and Cor Basse* (1824), trans. Viola Roth (1994), 24-5.

<sup>126</sup> Dieppo, *Complete Method for Slide or Valve Trombone*, 16.

<sup>127</sup> Arban, *Complete Celebrated Method*, 6.

## **Arnold Jacobs, the Mechanics of Breathing, and Psychological-Flow**

### **Focus on the Psychology, Not the Mechanics of Breathing.**

The mechanics of respiratory function are complicated; the psychology of respiratory function is simple. When you concentrate on the psychology of breath, the anatomical structures will take care of the physical activity needed to do the job. Most actions we perform are anatomically too complicated to think about. Learn to communicate with the bio-computer part of the brain. Look for the child-like simplicity, not complexity. The study of respiration should not be taken out of context. The needs of the embouchure set up the requirement for the breath. You do not blow just for an embouchure; you have to sing with the lips. This is not done by knowledge of musculature or measurements; it's done very much by the knowledge of sound, by concept of tone.

Think of what wind does, not of how you produce it. Imagine blowing out matches or candles with a "hoo" sound. Blow cold, not hot air. Think of palm trees bending in a strong wind or a moving sailboat. Picture dry leaves and paper being blown down the street. Figuratively blow up a balloon. Visualize a river of wind both in and out. Imagine water flowing easily out of an open hose. Think of the tone of the instrument as a ball riding at the top of a spurt of water. For loud playing a faster spurt of water pushes the ball higher. For soft playing the ball rides on a lower and slower spurt of water. Think of using a bean blower to hit a target across the street. Imagine blowing flies away from your face. Use arm movements to simulate movements of air in and out.

You cannot put the brain in charge of individual muscles; coordinated groups of muscles are needed for function. You are not able to make value judgements about which muscles are being innervated. You cannot observe by self-awareness; you must use external stimuli. Visualize thick, fast air moving with minimal motors.

There is now sensory awareness of air below the larynx, so feel air at the lips and don't judge breath by body movements. Permit change in the shape of the body; don't create changes in the shape of the body. The descending diaphragm is the only muscle that protrudes the abdomen.

But forget all of that when playing. Avoid pseudo-function, that is, body movement without the movement of air. The diaphragm cannot be felt directly. The body can lie; it can change shape without taking in air and look as if air has been taken in. Tell the truth to your body. The body changes with breathing. Taking in air will enlarge it; blowing out air will make it smaller. Like a bellows, it needs to move to function. Breath is a variable. Don't stabilize it, but use it for fuel for vibration. A car will not go unless the engine gets gas. Stability means no motion, which means no wind. Quantities of air requires motion.

If you order shape change, you'll get shape change. If you order air as wind, you'll move air. The quantity and speed of air can't be heard. Focus on taking in air, not moving the body. Disassociate deflation from blowing and enlargement from inhalation. Deflation merely accompanies, and is a result of blowing. Enlargement merely accompanies and is a result of inhalation. Study the breath, not breath mechanics. What is important is the quantity of air that you take in and blow out. Avoid a large sensory involvement, or self-analysis of tissue in function. Concentrate on the movement of air, not movement of the body.

Breathe to expand; don't expand to breathe.<sup>128</sup>

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<sup>128</sup> Bruce Nelson, comp. *Also Sprach Arnold Jacobs: A Developmental Guide for Brass Wind Musicians* (Buchloe, Germany: Polymnia Press, 2006), 45-6.

## Chapter 3:

### Aspects of Flow in Brass Pedagogy: The Interview Study

#### Research Methodology

In order to investigate the interrelationship of traditional concepts of flow in brass-pedagogy with flow-psychology I have utilized a grounded qualitative research methodology. Grounded, in this context, refers to studies where the interpretive analyses are “grounded” in the lifeworlds and experiences of the participants in the first place, rather than beginning with the application of a particular theory or typology<sup>129</sup>. After analyzing the philosophical concept of flow in brass-pedagogy, and in the psychology of experience, through a historiographical exploration of brass pedagogy literature (as discussed in chapter two), I sought to determine if and how expert brass pedagogues might include psychological experiential concepts of flow in their teaching-methodology. In order to explore this practical question, I conducted an intensive interview study with four well-known master brass-pedagogues. Grounded interview studies are particularly well-suited for acquiring information related to experiential knowledge in order to make explicit what is often left implicit in practices. This makes an interview-study particularly applicable for research into the pedagogical methods of one-to-one studio music teachers, where because of the privacy inherent in studio teaching, it is otherwise challenging to ascertain the broad teaching philosophies and methodologies from the given practitioners. To facilitate depth, I conducted two interviews with each of the four pedagogues.

Through the interview study I was able to gather copious data from highly experienced educators, who, in all four cases, spoke candidly about their own extensive and varied teaching experiences, and which enabled me to focus initially on the ways in which those brass pedagogues employ traditional flow (i.e. *lyrical*, *technical*, and *flow of the breath*) methodologies—as well as explore their respective thoughts about how those traditional methods

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<sup>129</sup> As suggested by Dr. Dennis.

might intersect, contextually, with flow-psychology. By collecting data in this way, I was free of having to impose theoretical assumptions from behind the scene. Because all four of my interview participants are well-respected master-pedagogues with high rates of teaching success—and who have, between them, a combined teaching experience of well over a century, their vast experiential-knowledge provided an extensive amount of research data, as well as a fascinating concordance of pedagogical wisdom.

### **The Interview-Study Model**

My interview-study was based on an approach outlined in Csikszentmihalyi's *Creativity: Flow and the Psychology of Discovery and Invention*<sup>130</sup> and was informed by qualitative methodological scholarship. Although both interview protocols were designed to explore potential intersections between traditional concepts of flow with flow psychology, the first protocol concentrated on broad philosophical and methodological approaches in brass pedagogy (as well as the interview participants' brass performance and pedagogy related biographical overview)—while the second protocol focused more closely on the question of potential flow-intersections that the participants consciously (or unconsciously) apply in their respective one-to-one studio brass teaching.

Throughout the entire interview process my goal was to determine if there are any perceptible parallels between brass instructors who employ traditional and/or psychological applications of flow, and highly-successful programs of brass-pedagogy. A secondary goal of the study was to examine connections between traditional flow concepts in brass pedagogy and the potentiality for application of psychological-flow as an additional (yet essential) pedagogical tool. Because traditional applications of flow in brass-pedagogy tend to focus on the *procedural* aspects of the flow concept (e.g. how to phrase more lyrically, how to breathe more effectively, or

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<sup>130</sup> Mihaly Csikszentmihalyi, *Creativity: Flow and the Psychology of Discover and Invention* 12-16.



how to execute a technically virtuosic passage with greater ease)—and the application of flow-psychology tends to focus on the *experiential* aspects of flow—the interview study sought to substantiate my thesis that expert pedagogues intuitively, or consciously, provide pedagogical environments where *both* aspects of flow-pedagogy intersect in a way that maximizes the learning process.

All four sets of interviews were conducted between September, 2011, and November, 2013. Two of the four participants were interviewed in their homes, one in their teaching studio, and the fourth in his hotel room (whilst he was visiting the Yong Siew Toh Conservatory, in Singapore, where I am on faculty). With three of the four interview participants, I conducted the set of two interviews on consecutive days, while the fourth subject was interviewed twice over a three-day period. Each of the interviews were limited to no more than 90-minutes, with the average length around 80-minutes. As suggested by Csikszentmihalyi's model—and by grounded research interview practices including those illuminated in Dr. Dennis's article, *Validity as Research Praxis: A Study of Self-Reflection and Engagement in Qualitative Inquiry* where she advocates “for a complex unifying orientation towards validity, which relies on conceptualizing research as a dialogic performance<sup>131</sup>”—the protocols served as guiding markers throughout the interviews. Although I strived for a similar overall narrative-arc in each interview, I encouraged a conversational tone in each dialogue that sought to personalize the interview experience. Because my goal was to obtain genuine and reflective responses, I let the interview exchanges develop around the themes outlined in the protocols, and utilized those themes as flexible guideposts rather than hardened lines of inquiry<sup>132</sup>.

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<sup>131</sup> Barbara Dennis, “Validity as Research Praxis: A Study of Self-Reflection and Engagement in Qualitative Inquiry,” *Qualitative Inquiry* Vol 24, Issue 2 (January 2017): 110.

<sup>132</sup> Mihaly Csikszentmihalyi, *Creativity: Flow and the Psychology of Discover and Invention* 12-16.

### **Interview Participants**

In selecting interview participants my primary criteria were 1) representation from each of the four standard orchestral brass sections: namely, horn, trumpet, trombone and tuba; and 2) international recognition as master-teachers by their peers, former students, and by the broader brass-playing community. Secondly, despite being a small interview-study cohort of only four participants, I wished for a diversity of participants from different countries and pedagogical backgrounds—in the hope that those diverse perspectives might shed fuller light on the validity of my thesis. I feel very fortunate that the following four master brass pedagogues graciously agreed to participate in my interview study: Han Xian Guang, Horn Professor at the Shanghai Music Conservatory (retired); Mark Gould, Trumpet Faculty at The Julliard School; Ingemar Roos, Trombone Professor at the Norwegian State Academy of Music; and Daniel Perantoni, Provost Professor of Tuba at Indiana University’s Jacobs School of Music.

In order to put the interviewees in a broader historical perspective here are four brief biographical-sketches of the interview participants, in orchestral score order:

#### **Xian Guang Han**

I first learned of Horn Professor, Xian Guang Han (born 1935), when taking up my position as Artist Faculty at the Yong Siew Toh Conservatory of Music (YSTCM), of the National University of Singapore in August, 2004. Through discussions with professor Han’s eldest son Chang Chou Han (born 1959), who has worked and lived in Singapore since 1987, and is the Principal Horn of the Singapore Symphony Orchestra (as well as being Artist Faculty, Horn at YSTCM), I began realizing that Professor Han has had not only a significant pedagogical impact on his family—Chang Chou’s brother, Xiao Ming Han (born 1963), is also a highly successful horn player and teacher, as the Principal Horn of the German Radio Philharmonic Orchestra Saarbrücken (and Horn Professor at Beijing’s Central Conservatory)—but is also regarded as one of the most important classical brass players in Chinese history. After witnessing Professor Han give a brass masterclass at YSTCM, I also began realizing that similar to brass-

teaching icons in the West (e.g. such as Arnold Jacobs), Professor Han shared a number of key pedagogical approaches, including concepts relevant to flow-pedagogy.

Born on Hainan Island in Wenchang province, Han, at the age of 16, became the first horn student at the Shanghai Conservatory (which first opened in 1927) in 1951, and by 1957, had joined the ranks of the teaching staff, as the Conservatory's first horn-teacher. In 1956, Han was invited to the Prague Spring Music Festival as part of a delegation of up-and-coming classical musicians from China. Ukrainian conductor, and Music Director of the State Symphony Orchestra of the USSR, Natan Rakhlin (1906-79), was so impressed by the young horn player that he invited Han to be a featured soloist on Wolfgang Amadeus Mozart's (1756-91) *Horn Concerto No. 3*, K. 447, with the Prague Spring Music Festival Orchestra as part of that year's Mozart Bicentennial. This led to further international exposure including a bronze prize at the 1957 World Youth Music Festival in Moscow, and remarkably a shared second prize (no first prize was given) at the 1960 Concourse de Genève International Music Competition. Both accomplishments were historical milestones for a classical wind or brass player from China.<sup>133</sup>

Labelled as a member of the “emerging bourgeoisie” by the Chinese Government during the Cultural Revolution (1966-76)<sup>134</sup>—and due to the closing of the Shanghai Conservatory during this dark-chapter of modern Chinese history—Professor Han fled to British Hong Kong (which at the time was still a protectorate of the United Kingdom). Continuing his passion and perseverance for teaching, Professor Han took up general music teaching positions, first at various primary and secondary schools throughout Hong Kong, and eventually at St. Paul's Co-educational College and then Hong Kong Baptist University.

By 1996, and with a rapidly evolving political situation in China that sought to once-again embrace classical music traditions, Professor Han returned to Shanghai as Guest Professor

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<sup>133</sup> Li Zhi Yeoh, “Professor Han Xian Guang and his Contribution to the Horn World” (DMA diss., University of North Texas, 2015), 4-8.

<sup>134</sup> Li Zhi Yeoh, “Professor Han Xian Guang and his Contribution to the Horn World,” 18.

of Horn, and where he also assisted in founding Shanghai Conservatory's Musical Arts Academy Middle and High Schools—serving both as a music director and conductor, positions he held until his retirement in 2012. Since returning to mainland China in the 1990s, Professor Han has been centrally active in the broader brass-playing community as the first president of the China Horn Association, and as president of the first three Chinese International Horn Festivals, hosted by the Central Conservatory of Music in Beijing. Additionally, Professor Han and has served on international brass panels throughout the world. Professor Han's students hold principal horn positions throughout Europe and Asia, and his vast web of direct—and indirect second-generation—pedagogical influence on Chinese players of all brass-instrument groups is immeasurable.

#### Mark Gould

I first encountered trumpeter Mark Gould (born 1947) through his beautiful playing in numerous recordings from his nearly thirty-year tenure with the Metropolitan Opera Orchestra (1974-2003), and his particularly noteworthy performances on the Grammy Award winning Deutsche Grammophon recording of *Der Ring des Nibelungen* (1990), his dozens of appearances on PBS's *Live from Lincoln Center* opera telecasts, and through his extensive (and stylistically varied) solo and chamber music recording output. I was also aware that he was on trumpet faculty at The Julliard School (since 1982), but it wasn't until I joined the Malaysian Philharmonic Orchestra (in 1998), and began encountering a number of his former students (some of whom served in tenured positions in the MPO, and a number of guest trumpeters that visited the Orchestra), that I became more fully cognizant of what an extensive and unique pedagogical impact he has had on the international brass-playing community.

Mr. Gould's students fill major positions in orchestras and chamber ensembles in the USA, and around the world, including: Boston Symphony Orchestra, Cleveland Orchestra, the Philadelphia Orchestra, Chicago Symphony, Milwaukee Symphony, Seattle Symphony, New York Brass Quintet, Canadian Brass, Empire Brass, Boston Brass, Meridian Arts Ensemble, and a

former Jacobs School of Music Trumpet Faculty member, just to name an impressive cross-section of former-student successes.<sup>135</sup>

Since 2004, Mr. Gould has expanded his teaching roles to include heading the brass department at the Manhattan School of Music (2004-16), followed by a unique position, from 2016, at the Mannes School of Music at The New School, where in addition to his trumpet teaching he has been able to pursue his passion for cross-disciplined productions engaging the theatre, visual and video arts, and thus enabling students to experience what he feels through these multi-faceted projects is “the vanguard of music education and training” in the twenty-first century.<sup>136</sup> The combination of Mr. Gould’s first-hand experience with some of the most iconic classical musical establishments in the United States—with his unique cutting-edge contemporary internet presence—is an apt metaphor for the kind of traditional and modern intersections that are also exemplified in his broad-based pedagogy that has helped launch so many successful and multi-faceted trumpet careers.

#### Ingmar Gunnar Roos

In my nineteen-years as the Section Principal Tuba with the Malaysian Philharmonic Orchestra (1998-2017), I had the great pleasure of working with dozens of fantastic trombonists. In the process of holding a number of trombone-auditions over the years, the MPO brass-section was consistently impressed with the high level of trombone playing applicants who were from Scandinavia. Of course, the level of brass playing throughout Scandinavia has been notable for literally centuries (i.e. some of the earliest brass-treatises were written by Danish trumpeters<sup>137</sup>)—but nevertheless we took notice that many of these talented young trombonists were coming out

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<sup>135</sup> “Mark Gould,” New York Trumpet Ensemble, accessed February 10, 2018, <http://newyorktrumpetensemble.com/index.php?page=bio>.

<sup>136</sup> “Mannes School of Music at the New School Appoints Legendary Trumpeter and Performing Artist as Faculty,” The New School, accessed February 10, 2018, <https://www.newschool.edu/pressroom/pressreleases/2016/markgould.htm>.

<sup>137</sup> Bendinelli, *The Entire Art of Trumpet Playing*, 10.

of a singular studio—that of trombonist and master-pedagogue, Professor Ingmar Gunnar Roos (born 1945).

In addition to the high-level of musicianship that students from Professor Roos's studio all seem to possess, I also began to notice how consistently they shared personality attributes of seemingly apposing dyads: confident, yet humble; critical thinkers, yet open minded—all which made for great music-making and a fantastically collegial work-atmosphere. It was through these first-hand professional relationships that I became curious about Professor Roos's approach to brass-pedagogy. After interviewing him, I realize that the professional personas that he helped shape through his teaching were not formed by accident—but was indeed a conscious component of his overall teaching-philosophy.

I also learned that Ingemar Roos's own pedagogical training—first, with Palmer Traulsen (1913-75) former Principal Trombone with the *Royal Danish Opera Orchestra*; his later study with Dennis Wick (born 1931), former Principal Trombone of the *London Symphony Orchestra*, at the *Guildhall School of Music and Drama*; and finally (and significantly), his independent study in Chicago with Jay Friedman (born 1939) and Arnold Jacobs—all provided a fascinating (and balanced) grounding between traditional pedagogical concepts, and the modernizing ideas that were coming out of the Chicago brass-playing scene of the 1960s. This balance of forces in Roos's own professional development would have profound effect on his highly successful career as a performer—first as the Principal Trombone of the Norwegian Opera Orchestra, then with the Gothenburg Symphony Orchestra—and as a brass pedagogue, as Trombone Professor at the Norwegian Academy of Music in Oslo, Norway, and at the Academy of Music and Drama, in Gothenburg, Sweden. Professor Roos's highly successful track-record as a brass-pedagogue has lead to numerous recognitions, such as the International Trombone Association's *Neil Humfeld*

*Award for Excellence in Trombone Teaching* (in 2000), one of the earliest recipients of this distinguished teaching award.<sup>138</sup>

Daniel Perantoni

When I arrived to Bloomington, in August, 1994—as a twenty-six year old with four-years of professional playing experience—to study with Provost Professor Daniel Perantoni (born 1941) at Indiana University’s Jacobs School of Music, I arrived with the assumption that there were some sound-production and physical-tension limitations in my playing that I was going to have to simply accept as intrinsic properties of my tuba-playing. In the four years (1994-98) that I worked intensely with “Mr. P,” he consistently, persistently (and in many facets imperceptibly) corrupted and undermined this false assumption. In the exceptional tuba-studio environment of the Jacobs School, I began to realize that my experience with Professor Perantoni was the rule (rather than the exception), in the richly progressive pedagogical environment that Professor Perantoni fostered—both in his individual-students and throughout the entire tuba-studio-community. It began to dawn on me then—but has become radiantly clear since, that at the center of Professor Perantoni’s pedagogical philosophy is a deeply humanistic approach, that places great currency on the intrinsic artistic value and potential of his individual students.

I believe that part of the *Midas-touch* of Professor Perantoni’s pedagogical method lies in his ability to consistently get students in states of psychological-flow during individual lessons. Before studying with Professor Perantoni, I had studied the tuba for nearly fourteen-years—and despite having the great fortune to study with some great teachers (and at some great institutions)—it was under Professor Perantoni’s expert-instruction that for the first time in my pedagogical path, I found myself consistently falling into altered states of mind during my one-to-one studio lessons. Whether it was an ecstatic and sudden leap of progress, or a numbing series

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<sup>138</sup> “Humfeld Award Previous Recipients,” International Trombone Association, accessed February 10, 2018, <https://www.trombone.net/about-ita/awards/neill-humfeld-award/humfeld-award-previous-recipients/>.

of mind-shifting musical repetitions (and I can recall numerous examples of both)—I began noticing that in those states of what I now recognize as psychological flow, I was significantly less self-conscious than in the state of psychic-entropy that had first created my whole host of false assumptions.

Because Professor Perantoni catalysed an environment in studio lessons where states of flow—both traditional and psychological—were a persistent feature of my pedagogical experience, it was inherently more probable for me to be able to replicate those experiences outside of my one-to-one studio instruction. I believe that this kind of psychological unlocking-feature, that I experienced under his tutelage, has been an important key to Professor Perantoni's inimitable track-record as a legendary brass-pedagogue—and indeed, is a common feature in highly-successful brass-teaching methodologies—and is a central element of flow-pedagogy.



## Chapter 4:

### **Flow in Brass Pedagogy: Data Analysis and Interpretation**

In order to gather the data from the interview-study, I utilized a high-quality digital recording device to capture the dialogue of each of the eight interview-sessions (i.e. two-interviews per interview-study participant), and subsequently had all eight interviews transcribed by a professional transcriptionist. Once I received the transcriptions of all of the interviews, I reviewed the audio-files against the transcriptions, and corrected and edited them in order to assure accuracy in content (i.e. musical and technical terminology), and context. All of the interviews were conducted in English. Due to Professor Han's limited English, Sze Ting Woon, a bilingual horn student from the Yong Siew Toh Conservatory of Music, assisted as a translator throughout both of the Han interview sessions.

For the analysis of the data I applied a grounded qualitative method in which I encoded the data gathered from interviews into a number of thematic categories. A grounded approach requires that researchers identify codes for the data based on the meaning the interviewees would claim for themselves. In grounded methods, no outside theory is used to generate the initial set of codes. Utilizing *Dedoose*—a web-based application for qualitative and mixed-methods research—I selected, developed, and collated codes drawn from the master-teachers' shared professional and pedagogical experiences, with particular emphasis on how the participants conceptualized both traditional and psychological aspects of flow-pedagogy. The data-codes I utilized are illustrated in a data-cloud generated by the *Dedoose* software—and is attached to this document as *Appendix C*—with the most oft-appearing codes displayed more prominently in the data-cloud.

Once I had encoded all eight of the transcribed interview data, I reviewed the encoded material drawn from the interviews, and began organizing the codes into themes related to the research question—of how traditional and psychological aspects of flow pedagogy might

intersect, in one-to-one brass studio instruction. I also began comparing and contrasting themes amongst the four participants' perspectives in order to explore similarities (and differences) between their pedagogical-methodologies. Because thematic categories in grounded qualitative research reflect tacit—often taken-for-granted ways of making sense of pedagogical experiential processes, processes which are not easily articulated—I used these thematic categories as a way of articulating a response to my research.

Below is an overview of primary and secondary themes that emerged from the interview-study. The data is organized, once-again, in orchestral score order, and in vignette form. With each of the first four vignettes, I focus on the individual interview-study participants and highlight themes that seemed particularly central, distinct, extraordinary or evocative of each of the master-pedagogues—with additional associate and supportive input included from the other three participants. A fifth section focuses on a characteristic that was particularly strong and compelling in all four interview participants: *humanism*.

### **Professor Han and Boundless Vision**

The very diverse and confusing aspects of these phenomena are, so far as I can see at present, completely explicable on the assumption of a psychically relative space-time continuum. As soon as a psychic content crosses the threshold of consciousness, the *synchronistic* marginal phenomena disappear, time and space resume their accustomed sway, and consciousness is once more isolated in its subjectivity. We have one of those instances which can be best understood in terms of the physicists idea of complementarity.<sup>139</sup> – C. J. Jung

From the initial interview session with Professor Xian Guang Han, I began noticing a series of striking parallels between Professor Han's pedagogical methodologies and those of Arnold Jacobs. For example, after a series of questions regarding brass breathing-technique, Han responded that, "air is like the speed of the bow, and the embouchure is like the string [vibrating from the bow]". Not only was this powerful conceptual metaphor similar to a Jacobsian way of

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<sup>139</sup> C.J. Jung on the concept of *synchronicity*. Carl Gustav Jung, *On the Nature of the Psyche*, trans. R.F.C. Hull (Princeton, NJ: Princeton University Press, 1969), 169.

thinking about air-use, but Han's use of a conceptual metaphor *in of itself* resonated in its striking similarity to the way Jacobs applied similar metaphors as pedagogical tools.

By the second interview session, even more explicit resonances with Jacobs's underlying pedagogical methodologies began rising to the surface, particularly with Professor Han's passion for a physiologically-informed approach to breathing (a strong interest Arnold Jacobs shared). In a dialogue regarding problematic early-twentieth-century breathing methodologies—ones that advocated tensing of the diaphragm, Han mentioned that “in China [when he was a student] there were lots of misconceptions about breathing technique and pedagogy,” and that brass students were being taught to push from the diaphragm, exclaiming disappointingly “but if there's no air, it's not correct!”. As he gained experience as a brass performer-pedagogue, Han realized the wrong-headed nature of this antiquated approach and began advocating a much more streamlined, holistic method, that teaches the brass-student to remember three simple breathing concepts, “the air has to be full, the air has to be fast, and the player needs to be relaxed.” Han's modernized conception for brass-instrument breathing avoids the outmoded tension-creating maxims such as *push from the diaphragm*, and is very much along the same conceptual line as Jacobs well-known deconstructive axiom “song and wind”.

At this point in the interview (and while I began to wonder about Professor Han's source and origins for his own pedagogical approach towards breathing), Han began repeating the Mandarin word *wu li* (物理), numerous times. Before Sze Ting uttered the translation, I recognized the word from the popular book about physics, *The Dancing Wu Li Masters*<sup>140</sup>. Indeed, Han was explaining that the “speed of the air is all about the physics, and how the mouthpiece and the air-direction interacts [with the player], and the [player's] body, *it's all physics*.” Adding that “when we play, we don't want to think too much, so it's during our practice

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<sup>140</sup> Gary Zukav, *The Dancing Wu Li Masters: An Overview of the New Physics*, (New York: William Morrow and Company), 1979.

that we're going to make [the breathing process] very natural." Those familiar with Arnold Jacobs's methodologies might recognize this as nearly identical in its conception with Jacobs's idea of separating the "doer" from the "thinker," of each student's psyche—so that through careful practice and reflection with the thinking side of one's psyche, one can condition the act of performance as a "doer," making the art of brass-playing into an automated, seemingly effortless, act from what is objectively, and intrinsically, unnatural behaviour.

Enough parallels were emerging between the two master-brass pedagogues that—even in the midst of the interview—I was becoming increasingly fascinated by the potential conceptual-synchronicity, asking Professor Han, "often times in history, concepts can arise at the same time [but in different places, independently]. I was just wondering if you were aware of what was going on in Chicago and with Arnold Jacobs and specifically his breathing-pedagogy [as you were developing as a horn-teacher]?" To which Han replied that his concepts were "based on [his] own personal experience and through many years of teaching." As I would go on to learn, Han—as was the case with Jacobs—is fascinated by the psycho-anatomical aspects of brass-playing and pedagogy.

In Han's case, the seed of his interest was very likely planted by his physician-mother—who because of the untimely passing of Han's father (when Xian Guang was a new-born)—had the sole-responsibility of raising her son. As a Medical Doctor, Han's mother likely instilled, in her son, a life-long fascination with the physiology of the body-mind's experiential interaction with a musical instrument.<sup>141</sup>

In the excellent *Professor Han Xian Guang and his Contribution to the Horn World*, author Li Zhi Yeoh chronicles Han's life-work—as well as obviating the Professor's underlying love of the science of brass-pedagogy. In Yeoh's interview with Han, the master-pedagogue explains that, "For decades, horn teaching in China, and abroad, has lacked scientific theoretical methods.

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<sup>141</sup> Li Zhi Yeoh, "Professor Han Xian Guang and his Contribution to the Horn World," 36.

Most methods are based upon the feeling[s of individual teachers].”<sup>142</sup> Han, thus warns against an inflexible-subjective stance, positing that it is important to strive for a more universal and objective pedagogy, “avoiding methods that rely solely on a student’s talent,” and arguing that “we can only improve the teaching-technique and results through critical analysis of basic scientific concepts.”<sup>143</sup>

Earlier in the same interview-session—and the topic that got me thinking about the interesting similarities between Professor Han and Arnold Jacobs—I inquired into Han’s pedagogical approach to teaching musical phrasing and lyricism. He responded with a beautiful turn of phrase, explaining that during lessons, “he uses a lot of vocal-like singing, but [teaches not normal singing], but rather to *sing through the deep heart*,” and that “with very pure, concentrated listening, a student is able to play correctly, and accurately . . . so, one needs to listen very deeply, instead of just at the surface.”

Thinking that there might be a slight translation issue—and to make sure I understood Professor Han’s concept fully—I asked, “so transferring the deep singing that’s happening *in the head*, through the instrument?” To which he emphatically replied, yes, but “deep singing *in the heart*” through the instrument. In other words, for Han, its going past the act of *thinking*, when performing—and teaching performance—at a high-level, and transforming one’s brass-playing into a syntropic act of mind-body flow. As with Jacobs, Han advocates going past the mind (i.e. past the “thinker”), in acts of performance, in order to sing through the deep heart (i.e. “the doer”), in order to create the profoundest kind of lyrical-flow.

Similarly, in the realm of technical-flow pedagogy, Professor Han focuses on a singing-lyrical approach, “like in a concerto, there’s some parts that are very difficult, technically, [but even here it’s] through the song, maybe like coloratura [singing]” to master the technical flow. “So always through singing?” I asked. “Yes, always singing, like coloratura,” Han replied.

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<sup>142</sup> Ibid, 45.

<sup>143</sup> Ibid.

This is not to say Professor Han, foregoes traditional tools of technical facility, such as careful study of *Kopprasch*, *Mueller*, *Gallay*, or *Kling* etudes (four of Han's favorites), but rather that all types of playing should be imbued with this persistent *deep singing from the heart*, i.e. even in rapid technical-passages, wherein the most relevant vocal-equivalent is florid *coloratura* singing.

In Yeoh's study, Han expresses this deep-heart concept even at the granular, fundamental level of ear-training and sound production, explaining to Yeoh that "the key to accurate pitch, good tone, is derived from the heart,"<sup>144</sup> thus underscoring an essential conceptual-leap that often separates a sophisticated professional-artistic approach from a developing-student's way of thinking about brass-playing: intuitively-syntropically (i.e. flow) driven for the experienced professional—but often mechanically-entropically driven for the student. For Professor Han, all great musical art from brass-playing fundamentals to concerti-performance is *singing from the deep heart*.

Indeed, brass-fundamentals are central to Han's pedagogical-approach, and during a discussion about how to achieve success with a student over a long-period of time, Professor Han stressed that it's important to go back to the basics, to the fundamentals of playing. However, he argues that it is not enough to blindly work on fundamentals, but, rather, it is critical one studies those concepts from a fresh, grounded, *relaxed*, perspective. For example, with rapid articulations, Han explains that many students struggle with playing rapid staccato passages, not because of an articulation problem *per se*, but because of an underlying tension problem: "students [who] cannot play the staccato very fast, think that they have to use more effort, more energy, but [that's not the fundamental problem] . . . It's not that a student cannot play [the articulation], because of a [lack] of energy; it's because they are not relaxed enough to play them." This point was further underscored in the following interview dialogue:

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<sup>144</sup> Ibid, 46.

MR. STEMPLER: So by going back to the basics, the needs of the student kind of become self-evident; is that the case? So that by encouraging—by going back to the basics with a student, then as a teacher you can kind of see what they need to work on?

MR. HAN: Yes.

MR. STEMPLER: Okay, great.

MR. HAN: This is an excellent position. . . There's an idiom in Chinese that in order to advance you need—it's not that you need to go forward, it's that you need to step back in order to see the broader picture [before going forward].

Indeed this Chinese idiom, 退一步海阔天空, is similar to the Western aphorism, *one step forward, two steps back*, but in the Eastern version it has a more proactive, positive and transcendent element. A more direct translation of the Mandarin is *retreat one step and your vision will be as boundless as the sky and the sea*.

After speaking with a number of Mandarin speakers, I learned that there is dualistic meaning here, 1) on the proactive side: it is a saying associated with combat, i.e. to conquer an opponent (or a problem), one should retreat in order to get fuller strategic perspective; and 2) on the transcendent side: that by stepping back (to brass-playing fundamentals, for example), one may be able to find a broader-approach that allows one's inner-vision to be guided towards boundless levels of knowledge and wisdom. Professor Han—in his life-long contributions to horn-playing artistry, and to the tremendous impact his pedagogy has had on the development of brass-playing throughout Asia—indeed embodies the kind of boundless vision beautifully captured in this Chinese idiom.

### Mark Gould and “It’s the Song Part”

A tree ascended there. Oh pure transcendence!  
Oh Orpheus sings! Oh tall tree in the ear!  
And all things hushed. Yet even in that silence  
a new beginning, beckoning, change appeared.

Creatures of stillness crowded from the bright  
unbound forest, out of their lairs and nests;  
and it was not from any dullness, not  
from fear, that they were so quiet in themselves,

but from just listening. Bellow, roar, shriek  
seemed small inside their hearts. And where there had been  
at most a makeshift hut to receive the music,

a shelter nailed up out of their darkest longing,  
with an entryway that shuddered in the wind –  
you built a temple deep inside their hearing.<sup>145</sup>

— Rainer Maria Rilke

With every brass-teacher, the question of how best to incorporate instrumental-technique within one’s overall pedagogical program, is an ever-important quandary. If it is over-emphasized, a student may become too focused on technical-facility as an end in-of-itself—thus missing the larger picture of serving the expressive and communicative power of the music they are studying. Alternatively, if technical training is neglected, a student-musician may have compelling musical ideas, but lack the technical-facility to communicate that musicianship through their performances. This dilemma is at the heart of Professor Han’s concept of *retreat one step*, i.e. that when a brass-student has great musical ideas they would like to express, but are locked-up with tension, then those ideas are not easily reproduced outside the student’s mind. By momentarily retreating—thus enabling identification and objectification of a core pedagogical issue, and then isolating that issue at hand—a skilled brass-pedagogue is able to guide a student towards realizing the critically important *yin-yang* relationship between advanced-musicianship

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<sup>145</sup> Rainer Maria Rilke, *The Sonnets to Orpheus*, First Part, I, trans. Stephen Mitchell (Boston, MA: Shambhala Publications, 1993), 3.



and the advanced-techniques required to communicate that musicianship. Master brass-pedagogues understand how crucial the balance of these two elements are for a student's success, and often find innovating ways of incorporating and balancing them into a broader teaching-methodology. This is the essence of successful *technical-flow* pedagogy.

Whereas Professor Han advocates *retreat one step*, Julliard Trumpet Faculty member, Mark Gould, has a fascinating twist on this same philosophy. Similarly, as with Han, when I asked Mr. Gould, "What Pedagogical methods, tools or literature do you have a lot of confidence utilizing for developing the technical facility of a given student?" Gould, in his response, underscored how important a relaxed, tension-free approach is for maximizing the benefit gained from the study of technique:

The only book you really need is the *Arban* [*Complete Method*]. So I would say the first one-hundred pages, or so, of the *Arban*. Then, of course, there are many etude books. The *Vassily Brandt* [*Etudes for Trumpet: Orchestra Etudes and Last Etudes*<sup>146</sup>] is very good for orchestral-studies. All the French etude books are also really, really, really good. . .

So, then it's a question of how the books are used. Slow practice, you know, not like, dirge-slow, but slow enough that things can be executed in a manner that is well done, clean, and very smooth *with the minimum amount of tension and pressure*.

Like Han, Gould underscored minimizing tension, yet the next thing Mr. Gould expressed was both surprising and enlightening in its utterly truthful matter-of-factness, "Now that will take about *four to five-years* for someone to *even start* doing that." Although this kind of pedagogical "retreat" may seem like a giant-leap rather than a *one-step*, a pedagogue who has taught or been around a large cohort of brass-students will understand how salient Gould's observation is. Gould explains that only once a student has begun to understand how critically important relaxation is, will they be able to truly comprehend the full-benefits of technical study:

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<sup>146</sup> Vassily Brandt, *Etudes for Trumpet: Orchestra Etudes and Last Etudes*, ed. William Vacchiano (New York: MCA Publishing, 1965).

A young student of like seventeen, or eighteen-years-old needs to prove to themselves that they can play a lot of hard pieces. So starting them with a lot of [technical] drills I find counterproductive. I think that it's very important that they play a lot of music at first. After they've been doing that, when they're about twenty, twenty-one, or maybe even twenty-two-years old, they can actually sit down and go "Brass-Technique 101," and really start to play drills and understand why in the hell they're playing them [in the first place].

Thus, by *not* curtailing a young-student's natural musical curiosity, Mr. Gould is able to foster a student's general musical-growth and understanding of the core trumpet-repertoire, and then subsequently—once the student is artistically mature enough to understand how essential brass-playing fundamentals are to advancing one's artistry—truly, and fully, introduce technical drills.

I was immediately fascinated by how clear this methodological approach was in Mr. Gould's mind—and was curious about his reasoning behind this consciously delayed approach—so I inquired, "Is this because, at that point in their development the student is able to conceive of the musical-line behind the technique?" Gould replied that, indeed, because a student has already played through some of the difficult trumpet-repertoire, and have thus began to realize their own technical limitations—they are able to more fully appreciate the value of studying advanced technique: "students will say, 'well, wait a minute, I struggle at this same passage all the time,' and [I'll point out to them that] it's simply a deficient area in their trumpet technique. And they'll [finally] say 'can we address that? What exactly am I doing wrong?'"

Gould explains that it's only then that "they get really-serious about making the leap to the next level." This is not true for all students, of course; there are indeed exceptions, "now, some people can do this already at a very young age. There are those who just have naturally [advanced technical-facility]. This is also a possibility. But that's, I mean, I don't really know about that, because that's not my [personal] history at all."

Of course, I found the last statement quite surprising, given that it was emanating from someone who had won the Principal Trumpet position at the Metropolitan Opera Orchestra in his 20s. Alas, towards the end of our first interview-session—Mr. Gould addressed some of the

origin-story behind this statement, and behind his broader philosophy regarding technical-development—which, in part, comes from his own developmental history.

When I asked, “In your own development and mastery of your instrument, what were the central concepts that you feel elevated your understanding of brass performance and pedagogy?” Mr. Gould explained, “well, I didn’t go to music school. So for me, I always played both classical music and jazz, but it was always about finding my own voice. It was always about that for me.” I was curious how self-aware Mr. Gould was (as a twenty-something trumpeter), about *finding his own voice*, so I pressed “Were you conscious of *finding your own voice*, at that age?” Gould replied:

No, [not really conscious of it], but I was always there, pretty much there. And by the time I was eighteen-years-old, I was playing more jazz at the time . . . but I [also] played a semester in the *Boston University Symphony Orchestra*. And that wasn’t going fast enough for me, you know, the way an orchestra rehearses. So, I left . . .

I guess it wasn’t until I was in my late-twenties that I *started to learn—after* I got into the Met [Metropolitan Opera Orchestra] that I learned to play, sort of. It sounds weird, doesn’t it? It sounds weird, but it’s true. I mean, I started to really think about technique, and how I was blowing into the trumpet. It was sort of a revelation, you know? You know, I started to think about it. . .

Inside of Mr. Gould’s renowned tongue-in-cheek banter, one can sense how revelatory a realization it was for him—from the perspective of his own pedagogical development—that it was *after* joining the *Met Opera Orchestra* (and the extremely-high artistic level expected from its Principal Trumpet), that he began deconstructing the methodology behind his technique; the very technique that allowed him to win the Principal Trumpet position in the first place.

Excellent jazz-playing requires the deepest kind of listening-skills. So, perhaps it’s no accident, given that Mr. Gould felt secure inside of *his own voice*—an aspect of which, was performing the floridly-virtuosic lyricism required of bebop—that just prior to auditioning for the Met, Gould had auditioned for Horace Silver’s (1928-2014)<sup>147</sup> band. As a jazz trumpeter, and as

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<sup>147</sup> Jazz pianist, composer, arranger and an important pioneer in the hard-bop style that first emerged in the 1950s.

an improviser from a young-age, Gould was intuitively combining advanced technical-flow with a sense of lyricism inherent in the jazz-tradition, a developmental element I inquired about:

“What I’m arguing is that maybe you were figuring out that, let’s take bebop, for example—a style that you may have been attracted to as a young person—that bebop [inflections] may have helped you intuitively learn how to combine a nice sense of line, with advanced trumpet technique.” To which Gould replied, “sure, the phrasing part would come out. That always came out, I mean, *because I heard it*, and I just did *that*.”

As a master-pedagogue, this element of developing deep-listening skills through improvisation is something Mr. Gould is passionate about paying forward. Whilst serving as Brass Chair at the Manhattan School of Music, Mr. Gould would host a “Blues Day” every year for his classically-oriented brass students. For *Blues Day*, Mr. Gould would bring in a jazz rhythm-section, teach some improvisatory-fundamentals to the class, and then have all the brass-students play at least two blues-choruses. His pedagogical-philosophy behind this exercise is to develop—within his students—a deeper relationship, both with their listening skills, and with their instrument itself: “Relating to your instrument that way, one doesn’t have to be a jazz player, [it’s simply about] relating to your instrument. And you want to talk about *flow*? Then play for me something in E-minor. I don’t give a shit what it is. Anything. That is a tremendous exercise in, okay, this is not about front-brain<sup>148</sup>, this is about hearing and just following this thing. It’s like a quick sketch. It doesn’t have to be good. And I think that it’s terrific [training].”

Indeed, for Gould, this is not a stylistic-exercise limited to jazz, but rather a deep-listening and responding exercise, wherein if a student is able to hear the minute-inflections within great music-making, *of any kind*, and imitate and repeat those inflections—then they’re potentiality for creating artistically meaningful music, including in the classical style, is catalysed by this significant developmental leap:

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<sup>148</sup> The frontal lobe is the area of the human brain where verbal and musical syntax is believed to emanate from. Gould seems to be suggesting intuitive “doer” over analytical “thinker” here, ala Arnold Jacobs.

If you could get someone to understand *that*, then they've got it. I don't care what kind of a song it is, pop tune, funk tune, rap tune. I don't care what it is. I point to the example of a fourteen-year-old singing along with a Britney Spears, and having every inflection and word down, like an *exact* copy.

Then why can't you do that with Håkan Hardenberger's<sup>149</sup> version of the Haydn *Concerto [for Trumpet]*? You should be able to do that—and this is certainly not emphasized enough—I mean, really copying . . . But [to do that] means you have to listen to it many times, and get how the notes are framed, articulation in front of the note, back of the note, middle of the note. Just copy it.

If one is going to sing from the *deep heart*, then they must also be able to listen to the Rilkeian kind of tall-trees-in-the-ear that Gould emphasizes through deep-listening. To develop proficient skills at jazz improvisation—or any kind of improvisation, for that matter—requires highly-developed listening skills—skills that are not so self-evident to most developing brass-musicians.

In the dialogues with all four interview-study participants, there was numerous commentary—similar to Gould's comments above—concerning the critical importance of brass-musicians developing expert listening-skills. And also, on the profound interrelationship between the kind of lyrically-flowing approach to brass pedagogy encapsulated in Han's *sing from the deep heart* concept—and the inverse-idea of *deep-listening* that was particularly emphasized in my discussions with Mark Gould.

When I inquired about the “pedagogical tools, or literature, that Mr. Gould has a lot of confidence in utilizing for the development of musical phrasing,” our dialogue turned once-again towards the importance of developing of listening-skills—particularly during the Information Age (where students can become easily distracted or misdirected by the sheer over-abundance of audio-information)—in order to lead students towards better musicianship through deep-listening. Mr. Gould explains that:

the idea is to get students interested to listen to either vocal music or even better, I've found, is listening to violin-music. And I find that to be very, very helpful, *but really listen*. And I actually spend time sitting down with current-students, and listening with them.

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<sup>149</sup> Håkan Hardenberger (born 1951), renowned trumpet soloist.

It is not enough for student to simply listen, they must learn to listen intensely, i.e. *really listen*, a pedagogical-tool that Mr. Gould emphasizes via his guided-listening sessions during studio-lessons.

In terms of developing a sense of lyrical-flow in phrasing, Gould (like Professor Han) advocates listening and projecting a vocal-like approach:

I'm talking about *really listening*, listening to, you know, a lot of stuff. If they are going to play, do what we do, if they're going to play in an orchestra . . . they sort of have to know this stuff, you know, on a high level.

There are singers I introduce to them. With regard to energy and phrasing, Cecilia Bartoli—I think it's the [*The Vivaldi Album*]. I've been using that . . . have them listen to that, *sit and listen with them* because, you know, trumpet players play all this Baroque music.

Emphasizing *song* in one's brass-pedagogy is not surprising, particularly given Mark Gould's many-year association with the Met, as well as his musical development in the United States<sup>150</sup>, particularly given that his was the first-generation of brass-players to be exposed to Arnold Jacobs's pedagogy—including ideas such as *song and wind*, a concept Gould brought up several different times during our interview-sessions. As with Professor Han, who seems to have arrived at similar-concepts independently—Jacobs methodologies, particularly the idea of psychologically integrating lyrical-flow (i.e. *song*), with *the* essential mechanism of brass-playing (i.e. *wind*)—is an approach that Mr. Gould also strongly advocates; as do, as we shall see, Professors Roos and Perantoni.

During a discussion regarding breathing technique, Gould commented on both the potential benefits of breathing exercises (particularly with metered breathing), and on the relatively recent evolution of breathing-methodology—inspired by Jacobs and formulated by pedagogues such as Pilafian and Sheridan in *The Breathing Gym*.<sup>151</sup> Gould underscores, however, that even more critical, conceptually, is whether or not the breathing is serving the *song*: “and this

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<sup>150</sup> Arnold Jacobs concepts, including *song and wind* were becoming more well known, particularly in the USA brass playing communities of the 60s and 70s, when Gould was developing professionally.

<sup>151</sup> Pilafian and Sheridan, *The Breathing Gym*.

is a relatively new pedagogical tool as far as I can make out, but it makes perfect sense. I mean, it does combine yoga breathing, which is also done on counts . . . But much more important is to have a concept of what you're trying to sound like, and then do that. That's—you know, that's the *song*, the *song part*. I don't care what it is you're playing; ***it's the song part***. Whether it's a fanfare [Gould sings a fanfare], so—you know, when I sing it to you, you could *hear my phrasing exactly, precisely* if I want to emphasize a certain note. ***If I sang it to you***, you would get it.”

It is only by building temples deep inside a student's hearing that one can hope to fully develop *the song part*—and for Mr. Gould, the dyad of hearing and singing are inextricably linked. It is only through the kind of deep-listening required to hear *phrasing—exactly* and *precisely*—that students are able to fully realize and communicate their own artistic voices; a skill that Mr. Gould has successfully instilled in several generations of world-renowned trumpet artists.

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Before departing *it's the song part*, it is instructive to take a brief look at highly related commentary that emerged from the three other interview-study participants on this same concept:

For Professor Perantoni, when I inquired specifically about psychological flow-pedagogy, he focused on tying this kind of *deep-heart/deep-listening* methodology in with encouraging the projection of a one's emotional-life, or one's *inner soul* (i.e. akin to Han's *deep heart*), from his students' brass-playing. Perantoni suggested that it is through the emulation of great-artists—such as Yo-Yo Ma, or Frank Sinatra (who are obvious experts at this kind of profound soul-filled communication)—that students can come to better understand how to embody flow:

In fact, I worked this morning with a young man who played the John Williams *Concerto for Tuba*, and he had all the notes down, but we needed to do more work on the *music*, more of the *line*. And all I was trying to do was to try to relate to him the experiences that he had, you know, like a beautiful girlfriend, and try to draw [musical inspiration from those personal experiences]—you know, in other words, don't be satisfied with less than the best.

Imitate, like Yo-Yo Ma, how would he *play* that or *listen* to that? but more getting him to play *from the soul*, you know? When he concentrated on that, it really started working.

That's the end product. I always try to include that with everything I do, but, you know, it's like teaching *music* to a student. There's an *inner-soul*. Like what Frank Sinatra did or—when you really get involved in telling a story.

Like Mr. Gould, Professor Perantoni shares a deep understanding and mastery of the jazz style, and for both musicians, jazz was particularly important in the formative years of their respective musical-personas. Their love of jazz—and its inherent element of improvisation, also likely informed their intuitive sense of deep-listening—and subsequently, the shared emphasis on imitation as an essential pedagogical-tool. Also similarly to Gould, Perantoni draws lyrical-inspiration from stylistically diverse methodological-sources (in addition to the more traditional brass legato-studies, e.g. *Bordogni Vocalises*) such as the *Great American Songbook*, a practice that Perantoni explains was specifically encouraged by Arnold Jacobs: “That’s what I was interested in, in terms of melodies, you know? Jake encouraged me. He says, ‘well gee, Dan, why don’t you play those [for developing lyricism and phrasing]?’ So, that’s what I do. I play a lot of tunes, a lot of ballads, and that’s just as good as doing the *Art of the Phrasing* [from the *Arban Method*], or even the *Bordogni Vocalises*, music of our times, you know?”

Professor Han similarly embraces stylistically-diverse, lyrically-flowing inspiration for brass playing and teaching, (as well as the integration of deep-musicianship with brass technique):

The horn is just a tool. A performer needs to have the music and the technique already in mind to carry out the art. I have seen a folk instrument named the *kouxian* [a Chinese mouth-harp]. It’s just a thin layer of film and looks like a leaf, but if you know how to blow it, it will create an amazing sound.



This [kind of lyricism] is not affected by the quality of the instrument, but what is in the performer's heart. When there are beautiful tunes within, only then can one express them through their music.<sup>152</sup>

For Professor Roos, like Han, Gould and Perantoni, music and musicality should always be the *raison d'être* behind the pursuit of brass-playing artistry, even when one is developing technique at a fundamental level. Roos explains, "I think if you can play two notes, why not make a [musical] relationship between those two notes? So, I know it's said that you can't make music before you can control your instrument, but at what point can you say that you can control your instrument?"

Because of the deep-wisdom articulated by all four of these "Dancing Wu Li Masters," I was beginning to expect the Zen-like insights, like this, by the time I met Professor Roos (who was the final interviewee of the four interview-study participants). The four master brass-pedagogues never ceased to impress me by their individually-unique variations on the extraordinary pedagogical themes that they shared. Ingemar Roos's comment—"at what point can you say that you can control your instrument?"—also serves as a metaphorical microcosm of a broader-philosophy underlying his pedagogy: that a musician-artist should always be in a state of persistent curiosity and evolving growth. For Professor Roos, the development as a brass-player is a life-long ongoing revolution!

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<sup>152</sup> Li Zhi Yeoh, "Professor Han Xian Guang and his Contribution to the Horn World," 46.

### Professor Roos and the Ongoing Revolution

Have you reckoned a thousand acres much? Have you reckoned the earth much?  
Have you practiced so long to learn to read?  
Have you felt so proud to get at the meaning of poems?

Stop this day and night with me and you shall possess the origin of all poems,  
You shall possess the good of the earth and sun . . . there are millions of suns left,  
You shall no longer take things at second or third hand . . . nor look through the eyes of the  
dead . . . nor feed on the spectres in books,  
You shall not look through my eyes either, nor take things from me,  
You shall listen to all sides and filter them from yourself.

I have heard what the talkers were talking . . . the talk of the beginning and the end,  
But I do not talk of the beginning or the end.

There was never any more inception than there is now,  
Nor any more youth or age than there is now;  
And will never be any more perfection than there is now,  
Nor any more heaven or hell than there is now.<sup>153</sup>

— Walt Whitman

Two of the numerous commonalities that emerged from all four participants of this interview-study is their 1) awe-inspiring sense of humility, and 2) their shared life-long passionate pursuit of performance and pedagogical excellence. Because each of them possess a seemingly insatiable curiosity for creative music-making in their own right, all four exemplify ideal models for the kind of curiosity and passion that they hope and expect out of their own students. If the concept of *flow-psychology* is encapsulated in the term *psychic-syntropy* as discussed in chapter-one, then this kind of integrated approach of self-actualization as applied to brass-pedagogy—wherein a teacher’s own artistic growth is constantly shaping and informing their evolution as teachers—might be termed pedagogical-syntropy. This kind of pedagogical-symbiosis was a theme that emerged a number of times, and was articulated in a number of salient ways by trombone professor, Ingemar Roos.

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<sup>153</sup> Excerpted from *Song of Myself* by Walt Whitman, *Song of Myself*, ed. Stephen Mitchell, (Boston, MA: Shambhala Publications, 1993), 3-4.

Very early on in our first interview-session, I asked Professor Roos, “What do you hope of a student's long-term learning experience with you, will stay with that student beyond his or her time with you?” What emerged from his response was a beautiful meditation on the pedagogical importance of individuation, and about artistic-curiosity within that frame of encouraging each student’s unique artistic voice:

What I would like to see, my ambition is—that the reason that [a student] started to study in the first place; that interest, that sparkle has become the fire that goes on and on and on—and that I've helped make that fire stronger.

So, I try to [help] everybody—I try to talk about many other things, also. You know, so you're curious about life. You're curious about differences. You're curious about what happens, what you do not [know]. So, as long as you are curious as a person and then, of course, also in music, as long as you're curious, you will develop.

When the curiosity stops, development will stop . . . when you say oh, my level of playing is more than sufficient for the job I have now. So, [one might] think I'm going to stay on this level and enjoy myself, that means that you're going down.

Because we are human beings, we have life. And in life, nothing is static. So, when you try static, you'll go backwards. So, I don't want [students] to see that as a stressful factor, but as a blessing, because when you're curious, life will always be interesting.

Of course, anyone who has managed to maintain life-long success as a performing-artist might have likely come to this realization (although it’s hard to imagine a more eloquent expression of it), yet I was particularly interested if this philosophy of artful-curiosity is something that Professor Roos consciously shared with his students; and inquired as much.

Indeed, Roos includes, as part of his curriculum, studio-class listening-sessions (akin to Gould’s guided-listening lessons), with the expressed intent to help pique and shape his students’ musical curiosity: “So we have listening sort of evenings. We listen to different things. And not only great things. We [also] listen to styles of playing that [sound] really strange and awkward, but [despite this] we [listen for what] this person has to say, musically. [Perhaps], this person doesn't play like we do, like what we prefer, but [we listen for] what's going on here, you know? To learn to be curious about something that [doesn’t sound] like you.” Part of the brilliance of this methodology of encouraging stylistic curiosity through

guided listening-sessions is that—through his philosophy of universality and open-heartedness—Roos is able to develop critical-thinking in his students, while, at the same time, caution them to the dangers of snap-to-judgement thinking.

Professor Roos believes that one of his primary functions, as a teacher, is to act as a time-saving growth-catalyst for his students—hence, an underlying reason for fostering open-hearted curiosity in his students is to help facilitate their growth towards ideal-expressions of their artistic-identities. In response to my question, “what do you think such a student would say were his or her benefits of a long-term student/teacher relationship?” Roos replied, “That their development could go smoothly. Because some people seem to [naturally] have this—I know there's a book that's been recently written, about the fact that talent really doesn't exist.<sup>154</sup> Have you seen that or heard of it? [The author, Daniel Coyle] says that Mozart was not talented. He was just in the right place [and at the right time] with his father, and that everything was all lined-up [to catalyse Mozart's talent]. It just happened. It's hard. I mean, it's nice to say there is no talent, because that gives everybody hope, somehow.”

This on-point flow-pedagogy anecdote aside, Professor Roos goes on to elaborate on his concept of pedagogue as time-saver-catalyst, “But okay, so I guess [back to your question]. I would say basically I see myself as a *time-saver* for the student. So, with the success thing—it's gone very well [when a student's] goal has been achieved, so to say, and their dreams have been fulfilled—whether it is to get a professional job, or to win auditions, etc. That's what I feel.”

A crucial step in time-management for any performing artist—and for the kind of time-saving catalyst Roos suggests—is learning the skill of focused-concentration. Concentration, of course, is not only essential in the act of performance, but is also critical in managing how

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<sup>154</sup> *The Talent Code* (2009) by Daniel Coyle, which was recommended to Roos by his teacher and friend, Jay Friedman, Principal Trombone of the Chicago Symphony Orchestra. Salient to flow-pedagogy, in part, because Coyle argues that it is through excellent mentoring and conditioning (right-place, right-time, right-environment), as suggested in Roos's Mozart example, that talent flourishes.

one maximises efficiency within individual instrumental practice-sessions. Persistent and efficient utilization of focused-concentration is also a central element of psychological-flow.

Although Professor Roos was *not* familiar with the specifics of Csikszentmihalyi's definition of psychological-flow, he was indeed familiar with how it has been applied to optimal-performance in recent years—in part, through his own exposure to similarly-constructed concepts from Arnold Jacobs, during his sabbatical-time in Chicago as a young professional orchestral-trombonist. So, when I asked, “do you consciously apply flow as a pedagogical-tool during one-to-one studio and/or class instruction of brass pedagogy?” Professor Roos replied, “both, yes. The first one, I'm [particularly] concerned about. I think I mentioned this yesterday that—I mean, when you say ‘flow,’ then I think ‘*completely absorbed focused concentration*’.”<sup>155</sup>

Roos underscores that practicing flow, i.e. exercising the act of *absorbed-focused-concentration* is something that needs to be integrated into a student's approach to the practice of their instrument, and in-fact, Professor Roos formulated a pedagogical axiom for relating this kind of flow-state. He explains, “So, I have tried to find a definition where I can [teach] concentration, and it's very hard. But I haven't found any better than ‘the complete elimination of unnecessary thoughts.’ That sums up in a way. I don't like that there is a negative in [the definition], but—[nevertheless], that to me, is what it is. It's anything that's unnecessary to what you're trying to accomplish, that sort of disturbs your concentration, or maybe ‘flow’.”

Of course learning to persistently harness focused-concentration is much easier to discuss than to put into practice, the challenge of which Roos was quick to point out in the following commentary—one that conveys both the vital importance of focused-concentration to student

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<sup>155</sup> Again, Roos is right on-topic here. See page 13 of this document, and that Csikszentmihalyi defines flow as “when humans are involved in activities that require *high levels of concentration*, particularly when that *concentration is focused* on a limited field of attention, there is a merging of action and awareness that promotes the potential for optimal states of mind.”

brass-players (and all performing artists), while recognizing its ephemeral and paradoxical elusiveness:

Your ambition is to be there every time. Because when you are in the audition, when you are in [a performance], you want to be in that mental state in which nothing stops you, [focused concentration] just sort of is—everything—then at that point, *everything you learned is available to you*.

You know? And so then—when your brain is waking up to the reality [that one is in a state of focused-concentration] then control, control, control [creeps into one's thoughts], you know, it stops the availability [of the concentration], which is sad.

So, we [as performers], try to tell ourselves yeah, I will really try to concentrate now. So then [one is] thinking about concentration, and [then, of course], you're not concentrating, because you're thinking about concentrating. So, I mean, what!?

Okay. So how did I do that? It's like getting the bar of soap in the water, you know? The harder you try, the less you have it.

Here, Professor Roos gets at the heart of why studying and teaching flow-psychology is so valuable (and so challenging), because, indeed *everything you learned is available to you* when one is in a state of psychological-flow.

Despite its paradoxical elusiveness, or perhaps *because* it is so elusive and challenging, is why it is so vital to incorporate flow-psychology—alongside more traditional applications of brass pedagogy—into a modern brass-teacher's tool-box. And if one retreats one-step, is flow-psychology any more elusive or challenging than the act of buzzing lips inside a piece of brass? Or the highly-controlled breathing required in brass-playing? Or fingers fast-flying on valves or slides? When it is framed this way, one begins to realize that flow-psychology is just another component of brass-pedagogy, less familiar than more traditional forms of brass-player training perhaps, but certainly no less essential.

Aphorisms like Arnold Jacobs's *song and wind*, can be helpful pedagogical devices for both teachers and students. By transforming challenging concepts into short-sentences or phrases, astute teaching-aphorisms can encapsulate in a kaleidoscopic-prism kernels of truth that grow deeper in meaning as students evolve alongside them. Professor Roos shared two excellent aphorisms that are quite salient, and get at the core of *pedagogical-syntropy* as it

relates to instrumental training, the first of which is tangentially related to the concept of practicing focused-concentration: *Do not spend time with your instrument.*

“Do not spend time with your instrument,” Roos explains. “You’re just wasting it. So, if your mind starts to wander, and you still have sort of twenty-minutes left in your practice-session—just take the break right there, because there’s no point, really.” There is a Gouldian kind of matter-of-factness about Roos’s aphorism. Because, of course, we need time with our instruments in order to master our control of them, but how are we utilizing that time? Are we *spending* that time? Wasting that time? Or are we (hopefully!) maximising the use of our time with our instrument through constructive-practice?

Roos further illuminated this concept through an example of the economy-of-scale of efficient practice sessions:

Two brass players.

So, first one plays [a passage] ten-times and a second player plays it one-hundred times. The first player plays [the passage] right sixty-times, and wrong forty-times, and the second player plays [the same passage] eight-times right and two-times wrong.

So, who plays it better the next day, two-mistakes versus forty-mistakes? [Granted], the first-player plays sixty correct-versions versus only eight from [the second player]. But, it doesn’t help. It doesn’t help.

It’s [simply] the facts of learning. I mean, this is the same with sports-technique and [in all pursuits] in which you want your body to be able to do [what it is supposed to do], when you need your body to be your slave [of focused-concentration].

That your body needs to follow precise, yet unconscious, directives from your mind—*when you need your body to be your slave*—is a direct analog with the concept of programming conditioned-responses into one’s methodological approach, a concept that was central to Arnold Jacobs’s teaching, and as Roos points out, has been a tried-and-true training method in other optimal-performance fields such as sports-psychology.

Early-on in our first interview-session (and as excerpted above), Roos remarked that: *Because we are human beings, we have life. And in life, nothing is static.* Indeed, if pedagogical-entropy is the chaos of unorganized, undirected learning that manifests stasis (i.e. lock-up) in a

student, and pedagogical-*syntropy* is establishing illuminating-order out of that chaos (and thus guiding (i.e. unlocking) that student towards success in practice and performance), then it follows that it is essential for teachers to lead their students towards pathways of pedagogical-*syntropy*.

This concept of persistent-evolution is so important to Professor Roos's teaching-methodology, that he made a point of reemphasizing it towards the end of our second interview-session, thus bringing our two interview-dialogues to a nicely-rounded conclusion. In the following passage, Roos compellingly ties together focused-concentration—in one's approach to playing and teaching—with a Marxian concept, a concept that is also an apt metaphor for life-long growth as a performing-artist:

Mao Zedong, Chinese dictator, had this [Marxist philosophy]—which, of course, makes sense [when applied positively], but was catastrophically [misapplied] in China with his case, but anyway the [concept is]: *the revolution must be ongoing*.

So, [as brass-players], when you play, the revolution must be ongoing. So, if you're playing and just *spending time*, nothing happens. What I tell students, and this has also to do with concentration and flow as pedagogical tools. I tell them "The body is not selective. What *you do*, *you become*. Your *mind* is selective. And *that* makes the change."

So, if someone does a warmup that they do every day, and this is just their mode of working, and [they feel they can] read the newspaper at the same time, or watch television, or something, and this [is relatively common] I believe . . . but, then [they are not practicing mindfully].

I mean, how do you notice if you're getting sloppy in intonation, with attacks, or sound production [if you're that distracted]? You can *spend* hours and hours with the instrument, like this. And [the problem is], you just slowly get a little worse all the time.

For me, that is as far away from *focused-concentration* as you can get. So, I ask my students, "have you ever felt in a practice-session that, 'Oh wow, my last five-minutes was great, everything went by itself!' and then realize [that it was actually] twenty-minutes?"; "Have you ever been there?"

Yeah. There—so be there.

In this commentary, Professor Roos captures the idea of flow both on the micro-level, i.e. the exercising of focused-concentration (*Yeah. There—so be there*), and flow at the macro, syntropy-pedagogy level, where as a performer and a teacher, one is seeking to find the most efficient and



integrated way of approaching brass-playing artistry (*the revolution must be ongoing*) on a day-to-day, year-to-year basis. If dancing wu li masters in the *field of physics* seek a unified-field-theory to bring together disparate scientific-theorems, then a dancing wu li master in the *field of brass-pedagogy* might similarly seek the kind of artistic-integrity expressed in Roos's ongoing revolution.

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Professor Roos is not alone in his ongoing brass-pedagogy revolution. Mark Gould, similarly advocated the importance of focused-concentration in practice sessions, and suggested that this is particularly effective when done as early in the day as possible. Mr. Gould advocates, “early-morning practice, number one, before the day has won. I think that's *really, really important*. the first thing you do in the day is pick up your instrument, have a cup of coffee and you're there in the chair.” And like Roos, Gould underscores patience, relaxed-focus, and economy-of-scale in the approach to one's practice: “Slow practice, not anxious practice, to avoid high-anxiety, meaning frustrated, play it forty-five-times in a row wrong, and then slam the trumpet into the wall. Of course, this takes time, you know? Like methodical [patient, experimentation, and], emphasis to them that the practice room is their laboratory. You're experimenting.”

While discussing this topic, Mr. Gould shared a brilliant concentration optimizing-tool that was devised by one of the many of his successful students—Mark Inouye, Principal Trumpet of the San Francisco Symphony Orchestra—called the “one-minute rule”:

I mean, as Mark Inouye would say, the *one-minute rule*. Like okay, I'm trying to figure this out, but this is not working, maybe I should try another approach. So it's that you're being proactive all the time that you're practicing, trying to figure out the [optimal] way of executing something, and then repeat [that procedure]. And I think that once you learn [a deeper way of finding musical solutions], that's the most important thing that a teacher can teach someone. You know, how to practice [optimally], how do you do it on your own. How do you get there [without] practicing your mistakes over and over again, you know, slamming away at something [mindlessly].

Again, this is the essence of syntropy-pedagogy, i.e. when a brass-pedagogue is availing students with excellent tools for practicing flow, and then guiding them towards pathways where long-term *ongoing-revolution* kind of flow can propagate on its own, as was clearly the case with Mr. Gould's catalyzation of Mark Inouye towards artistic and pedagogical excellence.

Like Roos, Gould also took a stab at finding the right metaphor for conveying flow; and astutely connected it to Asian philosophies of separating the *doer* and the *thinker* via meditative detachment, "So, the psychological preparation: there's a Buddhist doctrine of non-attachment. Non-attachment doesn't mean you don't care; it's [that] you're *so much in the present* that you're really not attached to the outcomes. You're right in the moment. You're right there. It would be nice to get there, wouldn't it?" When a performer, teacher or student finds themselves in a place *so much in the present* that all other realities have become secondary (i.e. *you're right there*), then they are indeed in a state of flow.

For Professor Han, embedded in his *ongoing revolution* is that we—as brass-teachers—persistently pursue the ideal pedagogical-tools for our craft; a kind of macro syntropy-pedagogy to the micro-implementations of optimal flow-psychology: "We as professional teachers need to equip ourselves with scientific knowledge about body functions, together with the knowledge of physics, to solve our students' daily problems. When we have solid proof to support our teaching, it will become our best tool. Teachers should not rely on teaching their students solely on their own feeling and personal experience."<sup>156</sup> This concept of *equipping ourselves with scientific*

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<sup>156</sup> Li Zhi Yeoh, "Professor Han Xian Guang and his Contribution to the Horn World," 45.

*knowledge about body functions is*, of course, strikingly resonant to the kind of approach to brass-pedagogy Arnold Jacobs pursued and promoted.

Gestural-playing or playing by *doing* (as opposed to playing by *thinking*), is a concept central to Professor Perantoni's pedagogy—as will soon be illustrated—but is also one shared by Han, “We have a Chinese saying, ‘Certain things can only be understood through gesture, not by verbal explanation.’ We should have concrete evidence, for example, in how to have a good solid high-register. But there is not a clear [rational] solution for this—how [does one quantify how] much air pressure we rely on to play [in the high register]?”<sup>157</sup> Like Roos's *focused-concentration*, and Gould's *non-attachment*, gestural playing—or playing by *doing*—is also a highly-effective way of conceiving flow-pedagogy, and why teaching via imitation has long been utilized as an *optimal-flow tool* (without necessarily being identified as such in traditional pedagogical-terminology).

Before moving to a fuller discussion of gestural-pedagogy, and by way of introducing his ventriloquist lips, it is worth touching on Professor Perantoni's *ongoing revolution*. Like Roos, and Gould in their admonishments about spending idle-time with one's instrument, Perantoni warns against warm-up exercises void of musical content: “But, you know, they always ask me, how do you warm up? And I shock them and say, ‘Well, I *don't*, too much. I just cover everything that made me good.’ And that's what Jake told me, ‘Dan, don't forget, cover everything that made you good in the first place.’ And I have taken that to the *n*th result. I'm in my 70s, and I'm still not playing too badly, you know, as a result of that thinking.” An understatement, of course, with Mr. P's two recently released excellent recent jazz-recordings attesting to this fact, his 2014 *Portrait in Black and White*<sup>158</sup> and the 2015 *Mr. P's Christmas*

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<sup>157</sup> Ibid.

<sup>158</sup> Daniel Perantoni, *Portrait in Black and White: Dan Perantoni Plays Jazz Tuba, featuring the AHA! Trio and Special Guests*, (Summit Records, catalogue number 631, 2014).

*Wish*<sup>159</sup> demonstrate that—as with the other three master-teachers in this study—the ongoing revolution can indeed be a lifelong artistic pursuit.

### **Professor Perantoni and the Lips of a Ventriloquist**

*The privilege of a lifetime is being who you are.*<sup>160</sup>

— Joseph Campbell

In addition to the already mentioned 1) remarkable sense of humility, and 2) a shared passionate pursuit for brass performance and pedagogical excellence, there is a third attribute that all four of the interview-study participants share: 3) an underlying pedagogical-philosophy of *humanism*. Highly successful teachers in all fields often come to realize that the greater number of students they can reach, the higher probability they will make a lasting, meaningful impact in the expertise they profess. Because one-to-one instrumental teaching is, by nature and necessity, both highly personal and relatively low-volume (compared to classroom teaching), the ability to connect with students—and their multitudinous individual personas—requires that a teacher be highly-adaptable to the wide-spectrum of humanity, if they are to achieve extraordinary success.

All four interview-participants, Xian Guang Han, Mark Gould, Ingemar Roos, and Daniel Perantoni, expressed, in their unique voices, ways in which a humanist approach was core to their teaching-methodology. This kind of sensitivity is not only key to each of their exceptionally successful teaching careers, but is also an important element of being able to foster psychic-syntropy, or flow, both in the short term (i.e. in a specific studio lessons) and in the long-term—by demonstrating flow via syntropy-pedagogy, in part, by exemplifying how one becomes their own best teacher.

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<sup>159</sup> Daniel Perantoni, *Mr. P's Christmas Wish: Daniel Perantoni and the AHA! Trio*, (© Daniel Perantoni on CD/Baby and I-tunes, 2015).

<sup>160</sup> Joseph Campbell, *The Joseph Campbell Companion: Reflections on the Art of Living*, ed. Diane K. Osbon, (New York: Harper Collins Publishers, 1991), 15.

Provost-Professor Perantoni offered particularly explicit commentary regarding humanism—and how he feels it has underpinned his approach to brass-pedagogy—but before concluding with his commentary on this matter, it is worth discussing some of Perantoni’s specific pedagogical tools, and why they have been so effective in his long and successful teaching career.

By way of introducing some of Perantoni’s pedagogical methodology, Professor Roos offers a nice frame for the importance of conceptual pedagogical-tools, more generally, as well as the importance of integrating them into a unified methodology. When I asked Roos, “do you perceive any interrelationship between the traditional tools of brass pedagogy, i.e. lyrical, technical, and breathing pedagogy?” He replied:

Yes. Absolutely, I use all three of these elements, but I would say, never separately. Of course we do breathing exercises, but then when breathing exercises occur it's always in context of something else. So, I try to get students to have a picture of what to achieve when they do them, and how it is helpful in *music making*. So, it's that you the lip exercises, the flexibility exercises, the breathing exercises, the *Arban* stuff, etc. but [they are] *not separated*. [In other words] they are not reduced to [only the individual constituent parts].

So, it's like you are creating your [brass-pedagogy] tools because you know what you want to make. It's like if you're a carpenter and you want to make something of this sort of shape and you have no tools, then you have to make your tool to make the thing that you have in mind. *The idea creates the tool*.

The *idea creates the tool*. And, of course, the ability to fashion, for students, the right pedagogical-tool for the moment, or better yet, as was demonstrated with Gould’s student, Mark Inouye—that you are empowering students to become master tool-makers themselves, is an especially potent meta pedagogical-implement.

In my own studies with him, Professor Perantoni utilized many of these sorts of uniquely-crafted *idea-tools*. Pedagogical tools that both significantly advanced my own playing-abilities, and ones that I have been able to pay-forward in my own teaching—as well as inspiring me to fashion my own uniquely crafted idea-tools.

One of Perantoni's favored tools is "gestural-playing," a concept I specifically inquired about during our second interview-session: "I'm going to just go back, because there is a concept that I have found has stayed with me a lot of years, and it's one that I've passed on to my own students, this idea of *gesture*. I believe you have expressed that part of this gestural-concept is that there's not only a purely musical element behind it, but that oftentimes the gesture you're trying to draw out of a student is an extra-musical thing, as well, like an emotion?":

MR. PERANTONI: Obviously an emotion but, you know, that gesture is also something to make it so you can just set a rapid [technical] passage relatively easily.

MR. STEMPLE: And have you found that sometimes if you suggest to a student to go for a gesture, that they're actually kind of bypassing all the subtexts of the technique of the phrasing, and going straight for the music?

MR. PERANTONI: Exactly. I kind of think all the technique is basically there by the time a student is eighteen-years old, you know? However, one has to have the discipline of doing it. It's like learning to throw a baseball. But it can be very complicated if you isolate everything. To bring it together quickly, you can do the flow business—as you're talking about—and the gestures, to put words to it, you know, achieves this.

This is nearly an identical argument (but expressed conversely) that Mr. Gould makes for delaying technical-training until a student is mature enough to be able to separate (and then reintegrate) lyrical- and technical-flow. As Perantoni points out, excellent eighteen-year-old brass-students may have technique, but haven't yet mastered the *musical control* of that technique. By focusing on musicality and repertoire (in Gould's case) or by playing *gesturally* (in Perantoni's case), they are both working towards integrating musicality *and* technique—often times without the students full-awareness that an important longer-term, larger-goal is also being concurrently achieved. This is the essence of excellent syntropy-pedagogy.

Fascinatingly, with Gould and Perantoni both having jazz-training as a significant element of their musical backgrounds—in which, in both cases, they were learning virtuosic bebop melodies as young brass players—this kind of *gestural* pedagogical-shortcut may have been intuitively learned. Perantoni explains:

I remember a very good lesson I had early in my life, where I had to play *Oleo*<sup>161</sup> on the tuba, and I asked Buddy Baker<sup>162</sup>. I said my God, how do you do it? He says sing it. And so I went [Perantoni sings “Oleo” opening], and it was completely a different articulation and a different language than one would do in a classical vein. I then played it the same way, and had no problems.

And basically, I mean the fingering, as long as I could do it on the mouthpiece, and as long as I played the first and last note of the phrase, you could hear every doggone-interval. Similarly, I can play a C-major scale without fingering it. It's not perfectly in tune, but the faster you play, you can do that. And I don't care what register it is. And that just has to do with *flow*.

Professor Perantoni goes on to explain that because of his musical background (his father was a trombonist and jazz-band leader), he intuitively incorporated this gestural approach, first-learned through jazz, to playing in classical orchestral-styles, as well:

My upbringing was listening to a lot of jazz players in the '50s and the '60s, and so I always approached my classical-music with the same concept, you know? I never thought it was hard, and when I did think something was difficult, *then* I had a problem with it. You know, if someone said “hey, this is hard!”.

When I was at the Eastman School of Music, I played [the orchestral excerpt from the] *Fountains of Rome*<sup>163</sup>. No one ever told me it was hard. I could play it. And then one-day somebody explained that it was indeed difficult, and *then I had a problem* with it. When I went back to the flow[ing gestural approach I had learned through jazz playing], I had no problem.

I wanted to confirm that it was indeed the flowing jazz-approach that led Perantoni to realize its potentiality for applications in brass-pedagogy more generally, so I inquired, “Because so much of '50s and '60s jazz, bebop-style is itself one where the technique required is highly flowing, do you think that helped, in terms of figuring out how to approach classical-technique?” To which Perantoni replied, “Oh, it helped me greatly, even to this day. And I *always* incorporate that into my teaching, and I can show you so many things in our tuba literature [that can be mastered through] that concept, you know?”

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<sup>161</sup> A hard-bop head, based on *I've Got Rhythm* chord changes, written by Sonny Rollins in 1954.

<sup>162</sup> Jazz trombone and euphonium player, and former Indiana University School of Music trombone teacher.

<sup>163</sup> *Fountains of Rome*(1918): symphonic tone-poem by Ottorino Respighi, with a notoriously technically-challenging tuba part, which is often requested at orchestral tuba auditions.

Another invaluable pedagogical-tool that Professor Perantoni has used to great benefit, is an *idea-tool* first conceived by Arnold Jacobs. It is the idea of projecting a brass-player's musical voice through the lips, in a way analogous to a singer projecting their voice through the vocal chords, or simply put, a brass player should: *blow from the lips*. When responding about how to integrate technical flow into a student's playing Professor Perantoni explains:

I mean, the first thing would be is, obviously, you know, when you're working on the physical side of [technical flow]; it's like learning how to throw a baseball. You want to start throwing strikes. The only way to produce a buzz is by blowing. And, you know, we go into a little bit of study on just how to use the air to the best of our ability.

Now, being a tuba-player, a low-brass player, we use more air under less intensity. I try to work with the sound first . . . The method I want to establish with a student first, is to *blow from the lips*. You're going to breathe from the lips and *blow from the lips*.

It's worth pointing-out Perantoni's repeated use of a sports-analogy. Indeed, when demonstrating or explaining acts of flow (such as throwing a strike in baseball, or producing an excellent buzz for a brass-player), it is helpful to frame them as singular psychologically-fluid acts—despite the numerous complex neuromuscular-activities behind those acts. Professor Perantoni goes on to explain that in addition to *blowing from the lips*, it is important that when employing articulation on a brass-instrument, to minimize tongue-obstruction so as not to disturb efficiently beautiful sound-production:

Now, as you get into that, there's a misconception of tonguing as far as I'm concerned—tonguing behind the upper teeth. If you do that, how can you blow from your lips? So I get students to blow, get a good sound without any aid of the tongue, and then incorporate the tongue to just assist the air. I'm a big fanatic of that.

I can describe the blow like one will try to start a little fire from a spark: you're going to blow those embers smoothly to get the fire going. That's a good description of the blow. And frankly speaking, it's been very useful in my teaching in the last several years. It's not a new concept. Arnold Jacobs used to say that.

I prefer that *consciousness*. I mean, that's a difference from if you are simply blowing [without that conscious-intent]. . . All these exercises on breathing—but none of them really get into the *blow from the lips* [methodology], you know? I need the lips to vibrate [efficiently], and so I'm thinking of that and of the sound- projection beyond. And [teaching this concept] can really fix sound-problems quickly.



By consciously removing the tongue from the act of sound-production Perantoni explicates the methodological connection with vocal pedagogy, in which quality of sound is similarly paramount, and because of this is pedagogically-separated—via textless vocalises—from potentially sound-obstructing diction and articulation training. And also a reminder of why lyrical-flow in brass playing, and its connection with singing (as thoroughly discussed in chapter-two), is such an important grounding for excellent brass-artistry. Although, *blow from the lips*<sup>164</sup> is a concept Professor Perantoni first acquired from Arnold Jacobs, his metaphorical *spark to ember* application of the concept is a brilliant tweak of Jacob's original—an adaptation in which Perantoni takes Jacobs's idea and fabricates it into a highly-applicable tool for pedagogical-flow.

When I inquired about Perantoni's perceived interrelationships between lyrical-flow pedagogy, and Arnold Jacobs concepts, he explained a similarly progressive application adapted from one of Jacobs's concepts:

There are two parts of the brain, the *thinker* and the *doer*. The physical side you want to get down to a *conditioned-response* without thinking of it. For example, if you take just the idea of a [brass-player] breathing, and you think about it, it becomes more difficult. Obviously, as a tubist, or as a brass player is, you want to use your full lung-capacity, but most importantly, you also want to be as comfortable as possible. That's one side of it.

Easiest way to teach that, obviously, is *away from the instrument* and then we put the habit back with the instrument. But everything is worthless unless your main goal is *making music*.

Like Han, Gould, and Roos, lyrically-flowing music-making should always be the end-goal driving *all* aspects of brass-pedagogy. By *separating the instrument from the student*, Perantoni is also tapping into an important element of optimal-training, utilized in both sports and the arts, that has developed in recent decades—whereby the teacher concretizes the separation of the doer

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<sup>164</sup>Bruce Nelson, comp. *Also Sprach Arnold Jacobs*, 34: Jacobs explains, “Air with no sound means that there is no signal from the brain. Send the buzz-signal to the lips to play, just as you send a signal to the vocal chords in order to speak or sing. Don't just push a button; be a *singer* in the brain. Don't let the lips hold back the air in fortissimo dynamics. Let the lips cooperate through vibration. Use vibrato to center the pitch and get a resonant sound without forcing. Buzz and *blow from the lips* in order to coordinate air with sound.”

from the thinker (i.e. through the literal separation of the player and their instrument)—so that the student can holistically internalize the conceptual-act. Through this process of separation—and reintegration—the act becomes more easily, and more wholly, a conditioned-response.

This whole conceptualizing-practice is a *radical* departure from the way instrumental music was taught when Han, Gould, Roos, and Perantoni were first starting out in their own respective training as student brass-players, and is why Arnold Jacobs’s contribution to instrumental-pedagogy was so monumental, and revolutionary. Professor Perantoni offers a bit of historical-insight into that pedagogical-evolution “At the time [ca. 1950s] many brass-players were using a lot of [embouchure] pressure, [and thus playing with a lot of tension]. When I was growing up, I was told by my Italian-[American] professors—and my father was a good trombone player—if it doesn't hurt, it's no good. Which—by the way—screwed me up for years. So, I'm very, very aware of that possibility, and so try to [teach students to play] as comfortably and efficiently as possible [in order to avoid that pitfall]; but also always stressing the *musicality* of the line.”

This combination of a relaxed, tension-free approach with musicianship as its central goal, is an approach that gave rise to such mantras as Jacobs’s *song and wind*, and is also the conceptual-focus behind flow-pedagogy—which similarly strives to focus the mind in a singularly-directed concentration of sophisticated musical communication. For a brass-player, this kind of projection of the mind’s musical narratives, i.e. *blowing from [and past] the lips*, and communicating sublime musical-thoughts, indeed feels a bit like one imagines a great ventriloquist’s mind-set, or as Professor Perantoni explains, “Now, the vocal chords are your lips, you know, and you have to learn that language of what you're speaking and saying, and just put it out in front of you, you know. *It's almost like a ventriloquist*. You have to throw it. Most importantly, is to get to the idea of *singing through your lips*.”

In a profound and broader sense, Provost Professor Perantoni has been acting as master-ventriloquist throughout his half-century of unparalleled success as a tuba-teacher. For the

countless number of his highly-successful protégés, Perantoni is definitely no puppet-master—in the sense of exhibiting overbearing control over his followers—but rather through his artistry, his pedagogical-brilliance, and through his generous humanity, embodies the kind of legendary brass-artist and pedagogue that we are all aspiring to emulate through our own individual voices. For Professor Perantoni’s students, the privilege of a lifetime has been that he has guided us towards our own best set of ventriloquist lips.

In the fall semester of 1994—when I first enrolled at Indiana University Jacob’s School of Music, as a Master’s student—it was also Professor Perantoni’s first semester as the newly appointed Tuba Professor. One of the first guest tuba-artists that semester, was a former-student of Professor Perantoni’s, the virtuosic-soloist, Patrick Sheridan. During a discussion with him, Pat expressed to me the magic of Mr. P’s amazingly successful track-record as a teacher, and remarked that Perantoni, in Sheridan’s estimation was the King-Midas of tuba-pedagogues—in the seemingly magical-way he was able to transform so many students into tuba-playing gold. I would add to that apt description of praise, that perhaps part of the magic of his *ventriloquist lips* lies in how Professor Perantoni epitomizes and embodies the kind of inestimable pedagogical-flow to which all instrumental-teachers should aspire.

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### **CODA: Humanism**

**Professor Han:** “Start with the music and then think of the emotions . . . Music is an art that co-exists with others. Our ancestors combined elements of both the aural and visual arts—it strengthened their richness by complimenting each other . . . The art of brass playing, needs to be constantly improved and strengthened in all aspects.”<sup>165</sup>

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<sup>165</sup> Li Zhi Yeoh, “Professor Han Xian Guang and his Contribution to the Horn World,” 46-7.

**Mark Gould:** “I will teach each student individually very differently, and emphasize things in them, musically or technically, in where I think they are. So I start exactly where they are, and go from there.”

“If the player becomes confident in their own decisions, and the ability to learn stuff on their own; that they’re not looking over their shoulder.”

“I would say that I could help them be more who they are, period. That’s it. Sort of take them where they are, and try to get them to be more who they are. I have no school—I’m not like beating any Bibles, you know? So more of that.”

**Professor Roos:** “Teaching is, of course, not a set scientific subject. It’s very much what I think I do, what I think they do, and what is sort of reasonable and decent.”

“That I make sure nothing I say ever disturbs these two things: 1) their self-confidence and 2) their joy of playing.”

“So there is an established trust that whatever I say, the student knows I want all the best for them . . . and that no matter what, even in so-called bad-times, you know where things are uphill, and when things don’t go as they wanted, that they still feel that I believe in them, and support them completely, and that I am always on their side.

**Professor Perantoni:** “We’re human beings, but there’s more to it. I like to try to get them into the soul of music, you know, the art, the soul. Look, in the stage of my career now it’s payback time. You know, I love the end result. When I hear somebody play good it brings tears to my eyes. To have a hand in the development of an artist is a privilege, and to work with a student-artist is absolutely a privilege.”

“I just want that student to be happy and I would like them to be as creative as possible and have a great life. Look it, I really, sincerely do not take myself that seriously. I take my art seriously. You get in danger if you go the other route. I wish them the most happy-life, as I have had.”

“I think teaching is you care; you try to do the damn best that you possibly can for that person. *You’re a humanist. You love people.* I mean, there’s a lot to be said about that.”

## Chapter 5:

### **Epilogue: Brass Flow-Pedagogy, Applications and Conclusions**

In 1996, Mihaly Csikszentmihalyi, the author of *Flow*, was interviewed by *Wired*, a relatively new online-magazine which had only existed for three-years in the still-dawning of the Information Age. In the closing remarks of Csikszentmihalyi's interview, the interviewer inquired, "Will the Net be a tool for advancing the evolutionary goal of a more complex consciousness?" To which Csikszentmihalyi replied with an admonition, framed within a telescoping historical-framework:

The Net allows the easy exchange of information and the communication of values. But I'm still fighting the notion that the Net is really going to result in a more complex vision of reality. When things become too easy, they also end up becoming more sloppy. In the Middle Ages, for example, people were willing to walk from Stockholm to Munich to meet somebody who had something important to say. They listened and thought seriously about what they heard. Now, communication is instantaneous. I'm afraid after a while we may not pay much attention to it. The gates of attention allow very few things to come in.<sup>166</sup>

At a time when neither the interviewer nor the interviewee could have possibly imagined the all-pervasive power of the smart-phone that—just a decade later—would further revolutionize the way people communicate and exchange ideas (not to mention the simultaneous explosion of social-media platforms), Csikszentmihalyi's response seems all the more prophetic.

In 2018, at a time when multiple-strata of society are voicing concern over the potential negative-impacts these miraculous devices and ubiquitous social media are having on our collective ability for extended concentration and genuine connection—particularly in the young formative-minds of *digital natives*—the danger seems to be two-fold.

Firstly, given the infinite amount of information, literally at our fingertips, it is easy to become desensitized to the inherent awesome power of these devices, leading us to "not pay much attention" to them, arguably at our own peril—and secondly, because the technology offers

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<sup>166</sup> John Geirland, "Go with the Flow." *Wired Magazine*, Issue 4.09, September 1996. Magazine on-line, first accessed 31 July, 2006, <http://www.wired.com/wired/archive/4.09/czik.html>.

such a complex semi-consciousness of its own, it has the potential to drive a wedge between authentic human-connection and community—precisely because it is so obsessively compelling.

The kind of deep human-connection and humanistic ideas that Csikszentmihalyi pines for—in a time when “people were willing to walk from Stockholm to Munich to meet somebody who had something important to say”—speaks to the kind of solace, refuge and deeply-personal and humanizing power that can still be found in the performing arts. As performers, in front of a live-audiences, musicians still have the power to deeply connect with other human-beings in the kind of significant way that is *something important to say*, even despite the barriers created by our invasive technologies and new media.

By extension, the uniquely personal relationship inherent in one-to-one instrumental teaching is potentially an even more profound human-connection that—when operating at the highest-level—engenders a kind of “complex consciousness” in both the student and in the master-pedagogue through their dual exploration of the vast riches of the classical tradition.

Brass performance and pedagogy represents the kind of “full-immersion with a feeling of energized focus, full involvement and enjoyment in the process of the activity” that is encapsulated in Csikszentmihalyi’s conception of flow. Perhaps it is no accident then that young, aspiring musicians are willing to travel the globe to seek out the music-teachers who they feel, “have something important to say”; thus enabling these future brass-artists to explore the outer boundaries of their potential, not unlike the pilgrims of the Middle Ages who sought analogous forms of higher-consciousness.

In my research into the interrelationship of traditional brass-pedagogy with the kind of flow-psychology illuminated in Csikszentmihalyi’s ground-breaking text, I had the great fortune to interview four master brass-pedagogues whose unique methodologies share a kind of unified field of flow-pedagogy that incorporate best practices of brass-teaching, both ancient and new. This kind of unified field of flow-pedagogy—first exemplified by master-pedagogues such as Arnold Jacobs—seems to have come of age in the 1960s, just as Csikszentmihalyi began studying

the psychology of flow. With the generation of brass teachers who followed the lead exemplified by teachers like Arnold Jacobs, explicit flow-pedagogy and optimal-performance methodologies have increasingly becoming widely embraced in music schools and conservatories around the world.

Further evolution of this kind of unified field of flow-pedagogy can be catalysed through conscious application and synthesis of *syntropy-pedagogy*, a term that suggests integration and incorporation of *all* aspects of flow-pedagogy, namely lyrical- , technical- , and breathing- flow together with the more recent application of psychological-flow into a coherent methodology. All four master-teachers investigated in this study are living examples of brass-pedagogues who have been highly successful in practicing this kind of *syntropy-pedagogy*. Finally, and significantly, when brass-students—through modelling excellent brass-pedagogues—are fully-able to embody and internalize the processes of syntropy-pedagogy on their own terms, and in their own pedagogical-voices; they will then be fully-empowered to manifest their own sublime flow-experiences, through performance, and through the evolution of flow-pedagogy—a methodology rooted in the ancient origins of brass-performance itself.

# Appendix A

## **Protocol for Interview Session I**

1. If a former student, one who was fully aware of your teaching methodology, were to write your biography, what would that student-biographer say guided or drove your pedagogical approach?
  - a. Tell me about the pedagogical methods, tools or literature you have a lot of confidence in utilizing for the development of musical phrasing and general musicality of a given student. Give me an example of how you have used that with a particular student.
  - b. Tell me about the pedagogical methods, tools or literature you have a lot of confidence in utilizing for developing the technical facility of a given student. Give me an example of how you have used that with a particular student.
  - c. When a student really needs work on breathing technique, what kinds of things do you do? Be as precise as possible and please share a story you feel especially proud of.
2. Tell me about an experience you had with a student that stands out as a success story in working on phrasing methodology, technical development, breathing technique or simply overall musicianship. Feel free to discuss both specific and/or general aspects of that student's overall development.
3. In an extended period of private instruction, what would it please you most to achieve with your students?
  - a. When you work with a student over a long period of time, how do you come to understand what the student needs from you?
  - b. Tell me about some of the benefits you have experienced working with the same student over a long period of time. What do you think such a student would say were his or her benefits of the long-term relationship?
  - c. What do you hope of a student's long-term learning experience with you will stay with the student beyond his or her time with you?
4. Tell me about a time you have felt most proud of a student? Least proud? Be as specific as you can.
5. Tell me about a time when you were disappointed in your teaching. Exceptionally pleased with your teaching.
6. In your own development and mastery of your instrument, what were the central concepts that you feel elevated your understanding of brass performance and pedagogy?
  - a. What roles do those concepts play in your approach to private studio instruction?



- b. Who were the most important mentors and/or role in your development as a brass player?
  - i. Of the pedagogical concepts you absorbed from those mentors, which of the concepts do you try to pass on to your own students?

## Appendix B

### **Protocol for Interview Session II**

1. Are you familiar with the psychological concept of “flow” as defined by University of Chicago Psychology Professor, Mihaly Csikszentmihalyi: “the holistic experience that people feel when they act with total involvement”?
  - a. If so, do you consciously applied “flow” as a pedagogical tool during studio or class instruction of brass pedagogy?
  - b. If not, do you consciously apply any pedagogical techniques that are intended to alter the mindset of your students in regard to their approach to practice and performance of their instrument?
2. Do you perceive any interrelationship between the traditional tools of brass pedagogy, such as the adaptation of vocal studies (i.e. Joannes Rochut’s adaptation of Marco Bordogni’s vocalises in his *Melodious Etudes for Trombone*), the technical/velocity studies of Jean-Baptiste Arban and Herbert L. Clarke, and the pedagogy of breathing as developed by Arnold Jacobs?
  - a. If so, does that perceived interrelationship affect your own methodological approach to brass pedagogy?
    - i. In general?
    - ii. For musicality/phrasing pedagogy?
    - iii. For technical/velocity study?
    - iv. For breathing pedagogy?
  - b. If not, how has the history of brass pedagogy affected your own methodological approach to brass pedagogy?
    - i. In general?
    - ii. For musicality/phrasing pedagogy?
    - iii. For technical/velocity study?
    - iv. For breathing pedagogy?
3. Do you perceive any interrelationship between traditional tools of brass pedagogy and the educational psychology of performance and practice as it applies to the study of brass instruments?
  - a. If so, do you perceive this educational psychology as an organic outgrowth of traditional concepts of brass pedagogy?

- i. What are the pedagogical tools you utilize to guide your students through the psychology of performance?
  - ii. What are the pedagogical tools you utilize to guide your students through the psychology of their independent practice sessions?
- b. If not, how do you prepare your students for performances?
  - i. What are the pedagogical tools you utilize to guide your students through their independent practice sessions?

## Appendix C

## Interview-Study: Coding Data-Cloud



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